

*The*  
**PHOTO** . . .

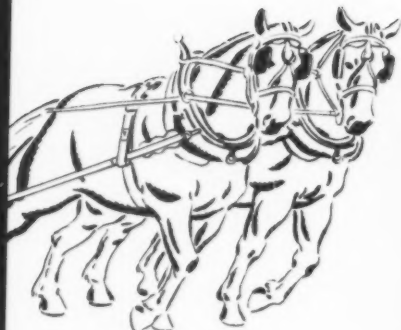
# *Lithographer*



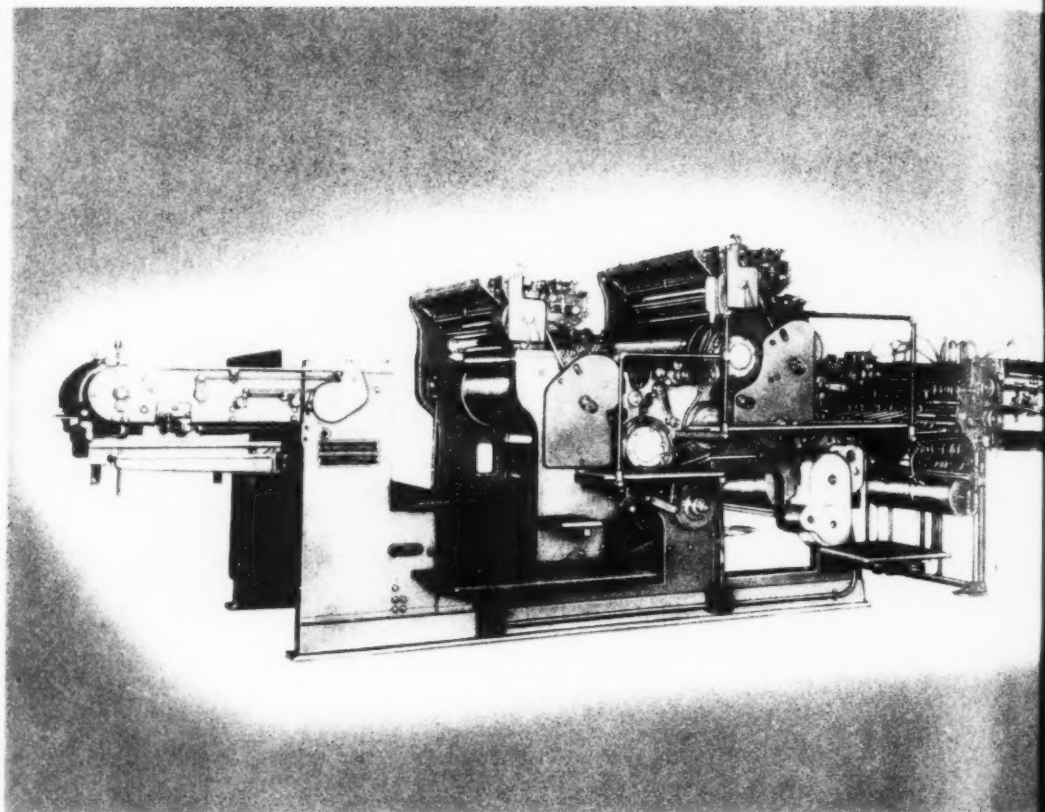
*Baukhuis*

*"A Lithographed Monthly for Lithographers"*  
**SEPTEMBER ISSUE • 1937 •**

No. 3



THE  
**Side Frames**  
ARE  
MORE THAN STRONG



For the sake of economy, unwise economy, the side frames of the Hoe Super-Offset Press could be channel-shaped, but they're not. When you design a press for speed there can be no compromise with ruggedness. Therefore, Hoe side frames are a solid four inches thick, with extra strength provided by bosses at the points where the cylinders enter the frames.

They are cast according to a Hoe metallurgical formula from a special high test alloy. Bored for the inser-

tion of the cylinder housings, the side frames provide the support of solid metal to guard against springing between cylinders and to assure impressional rigidity.

In supporting high speeds, this feature of Hoe design is a great improvement over cored side frames, holding split cylinder boxes, which suffer the obvious disadvantages of bolted connections.

Write for complete information describing other features of the "World's Finest Offset Press."

**Offset Press Division R. HOE & CO., Inc.**  
**General Offices: 910 E. 138th St. (at East River) New York, N. Y.**  
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**HOE**  
*Super-Offset*  
**PRESSES**



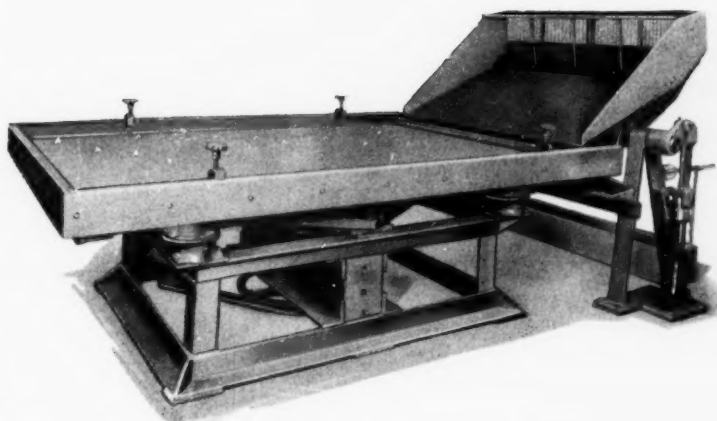
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## BY THE LEADERS!

The list of CURRENT satisfied users of the ZENITH — the only gearless, single eccentric graining machine made — reads like a "Who's Who" in lithography. With one voice the leaders of the industry acclaim this peerless machine.



- Many exclusive construction features have contributed to ZENITH'S Number One position in the lithographic industry. No noisy grinding gears — a single eccentric and self-aligning ball bearing that reduces wear 80%. Hydraulic marble lift is ZENITH'S latest exclusive feature. Replaces old marble graining baskets on all ZENITH grainers.

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*Literature on ZENITH equipment and rebuilt presses available on request.*

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# Get Better TYPED COPY

through this new  
Specially Equipped Underwood  
Standard Typewriter

## 2. DUPLEX RIBBON DEVICE

provides carbon paper ribbon for perfect typed impressions with the type face always striking an unused portion of the ribbon.

## 1. SPECIAL ESCAPEMENT FEATURE

simplifies right margin justification of typewritten sheet...avoids ragged, irregular margins...improves appearance of copy.



*Underwood Standard Duplex Carbon and Fabric Ribbon Machine equipped with special escapement for justifying right hand copy margin. The Underwood Noiseless also is available with the Duplex Ribbon Device.*

## 3. ROUTINE OFFICE TYPING

handled on the same machine through regular fabric ribbon. No lay up of the machine between typed composition jobs.

HERE in this specially equipped Underwood Standard Typewriter is the answer to your problems of better typed copy for reproduction purposes on your Photo-Lithography jobs. Not only does it provide fine, black, "fuzz-free" type impressions

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# THE PHOTO-LITHOGRAPHER

*Published in the Interests of Lithographers  
to Increase Sales Efficiency  
and Quality*

WALTER E. SODERSTROM  
PUBLISHER AND EDITOR

SAMUEL D. WOLFF  
ADVERTISING MANAGER

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Volume V

SEPTEMBER, 1937

Number 9

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SEPTEMBER 1937

3

# STEP UP PERFECTLY

## *on every plate*

The complete process of LITHO PRESS plate preparations is carried out in full daylight on the

## MULTI TRANSFERRING MACHINE

A precision unit for stepping up press plates by a simple MECHANICAL method — Accurate, perfect reproductions guaranteed

**T**HE plate maker can check the register of each color by a Superimposed impression of the next color on that of the last color transferred on the blanket.

Easily operated with no calculations or arithmetic for the operator, as each step or new position is arrived at by foolproof and simple mechanical means.

**S**INGLE color hair line military maps; nine color reproductions of "OLD MASTERS" as well as beautifully lithographed metal cans are now printed from plates prepared on the MULTI TRANSFERRING MACHINE. The same perfect results have been obtained by European, Canadian and now American plate makers.

Any size press plate up to 64"x44" can be prepared. The unit is complete—no other apparatus to buy. Plates prepared in less time than by other methods. Solids are reproduced more evenly.

**M**AY we prove to you the value of this machine and show you why over FIFTY have already been sold to leading PAPER and TIN Lithographers?

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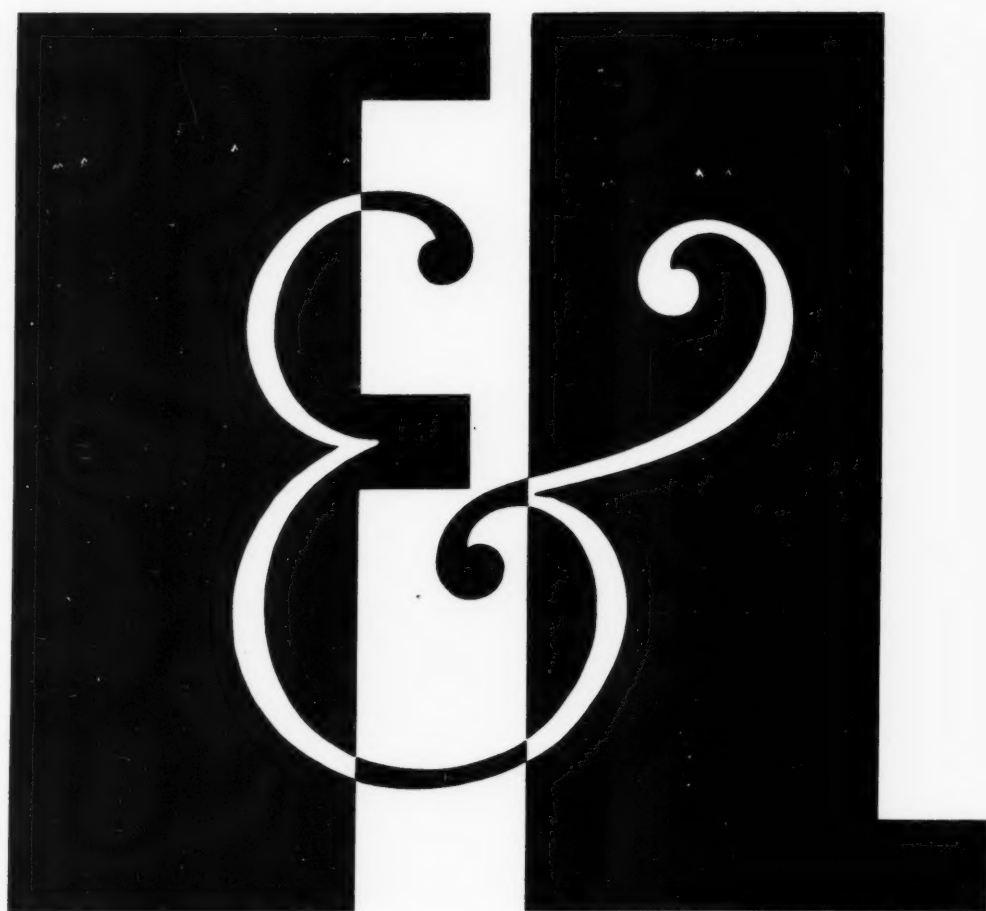
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*"Everything for the Lithographer"*

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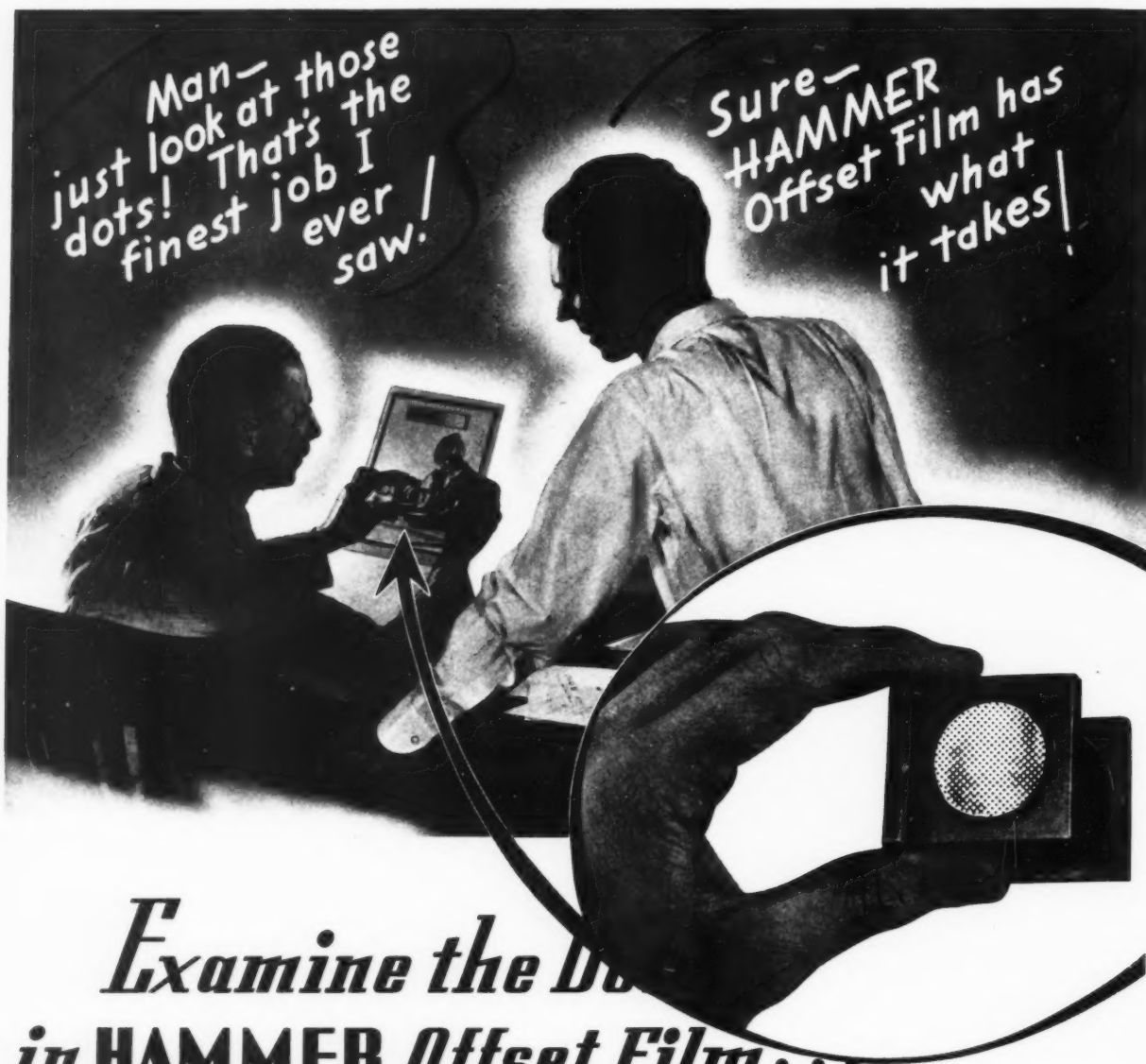
PHILADELPHIA

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Man—  
just look at those  
dots! That's the  
finest job I  
ever  
saw.

Sure—  
HAMMER  
Offset Film has  
what  
it takes!

*Examine the Dots*  
**in HAMMER Offset Film...**  
**• they tell the story!**

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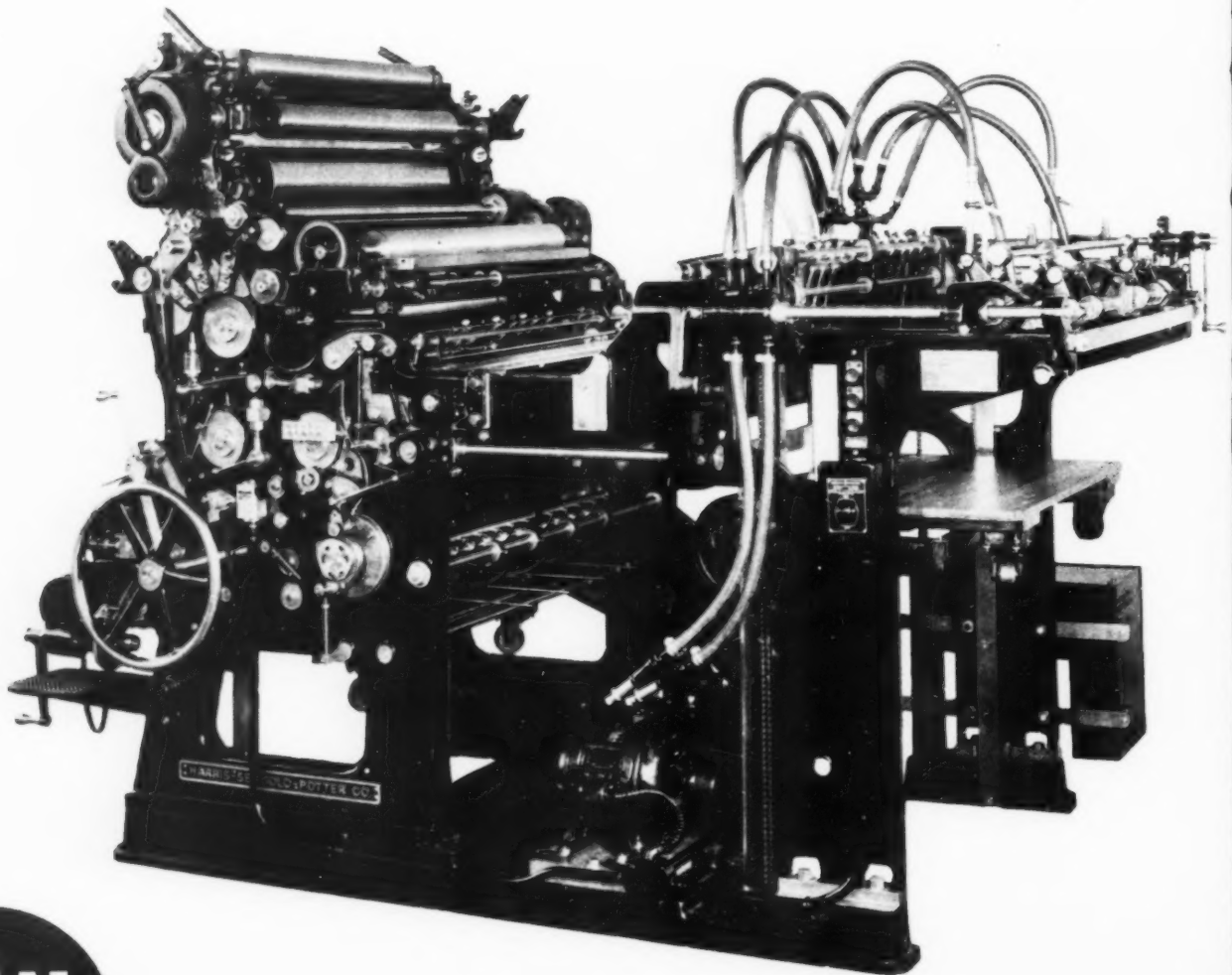
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for the PHOTO LITHOGRAPHER*

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*Ideal Commercial Market Units  
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21 x 38 SINGLE COLOR



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17x22 LSB—One Color

Stock Size  
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to  
17½x22½

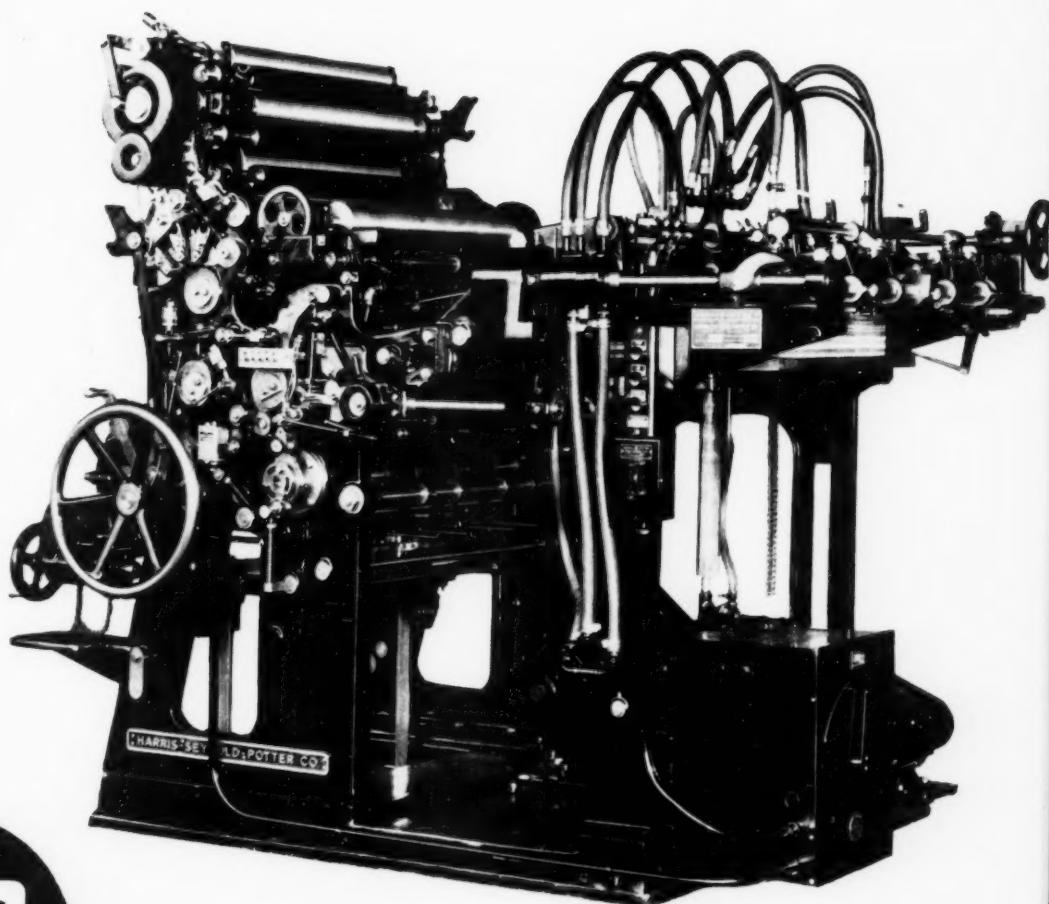
Transfer Size  
(max.) . . . 17½x22½

Plate Size . . . 19¾x23

Blanket Size . 23¾x23

Pile Feeder . Harris

Registering  
Mechanism Tumbler  
Grippers



# LSB

## 17 x 22 · SINGLE COLOR

## CONDENSED SPECIFICATIONS

21x28 LSN—One Color

Stock Size  
(range) . . . 10x14  
to  
22x30

Transfer Size  
(max.) . . . 21½x29

Plate Size . . . 24½x30

Blanket Size . 26½x30

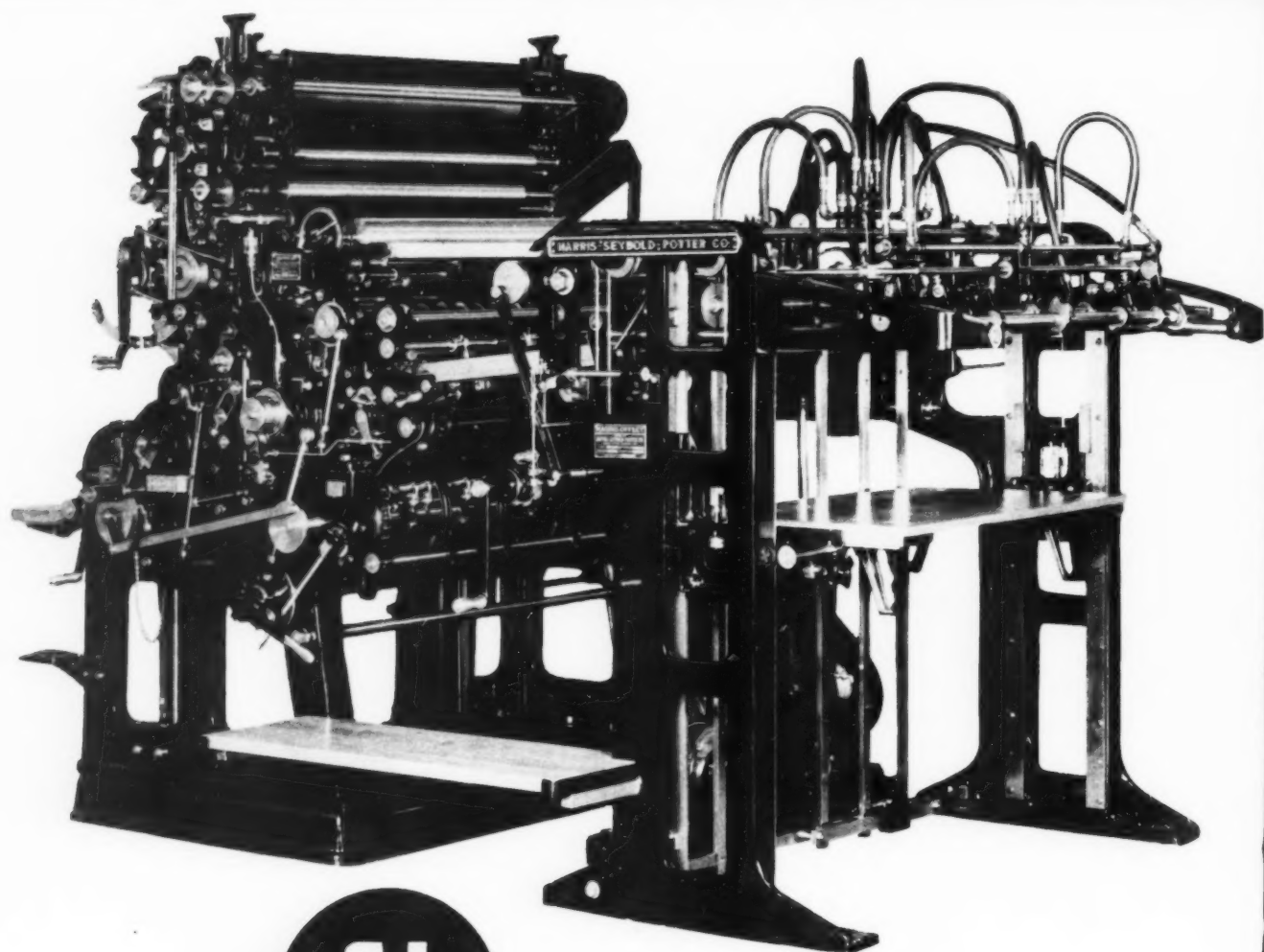
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*Versatility · Accessibility · Speed*

★ *High Speed Presses for Quality  
Black and White and Color Work*

# HARRIS OFFSET PRESSES



· 22 x 34 · SINGLE COLOR ·

#### CONDENSED SPECIFICATIONS

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23 x 36  
Transfer size (max.) . 22½ x 35  
Plate Size . . . . . 25½ x 36  
Blanket Size . . . . . 29¼ x 36  
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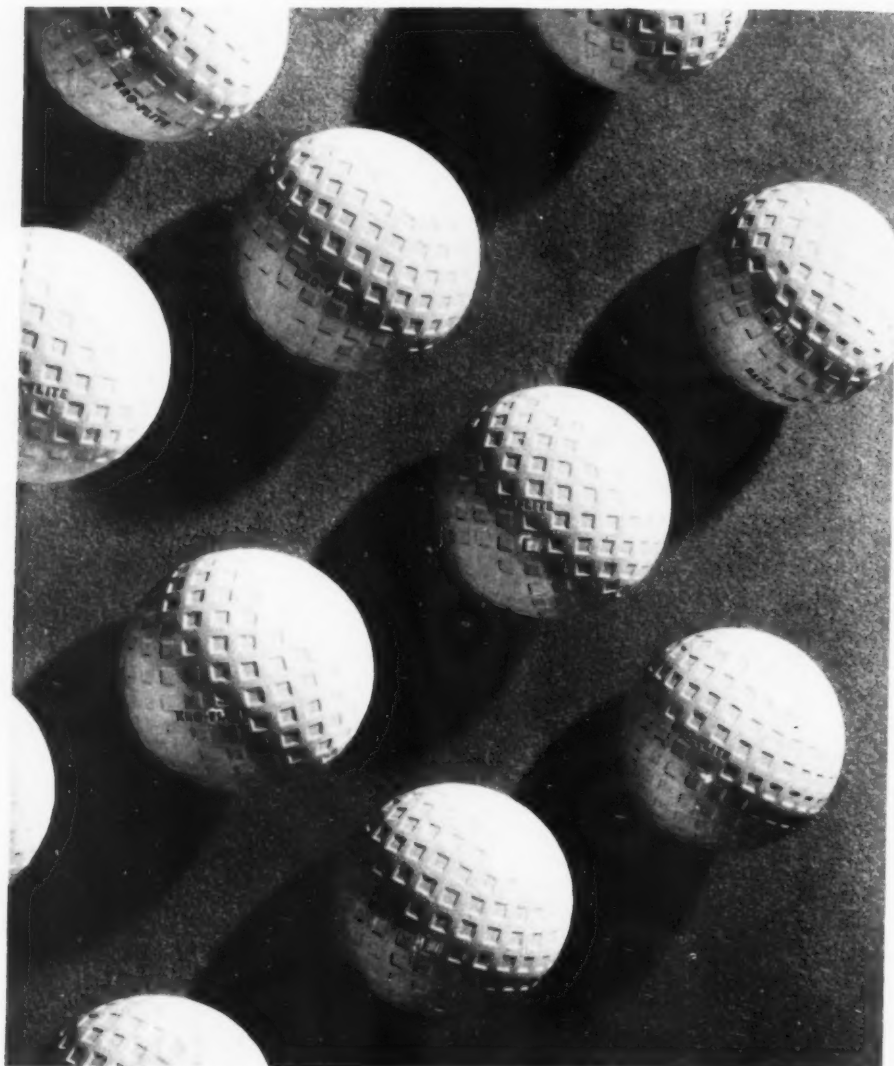
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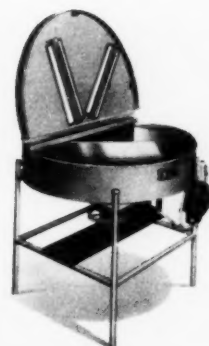
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ENLARGING FACILITIES?  
OPENING A NEW PLANT?

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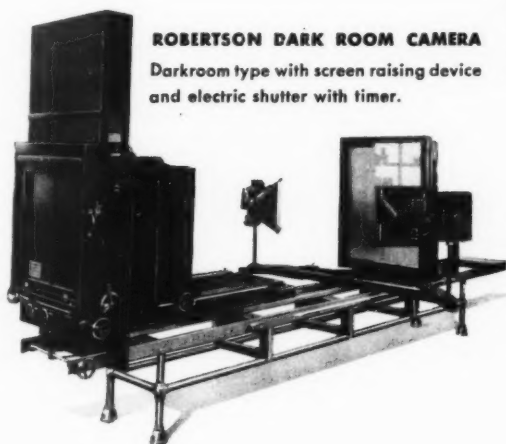
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Equipped with mechanism for automatically operating.



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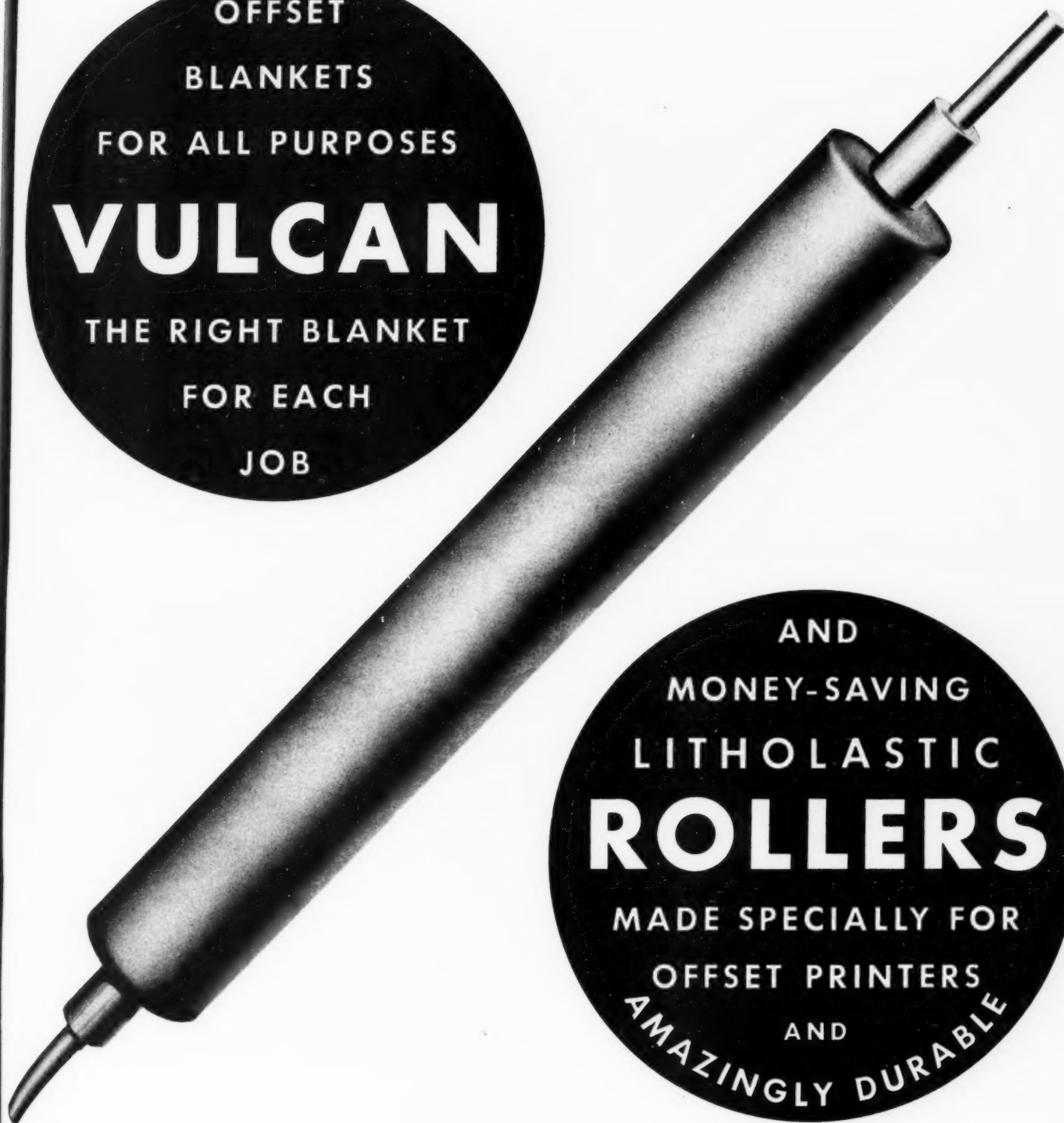
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THE RIGHT BLANKET  
FOR EACH  
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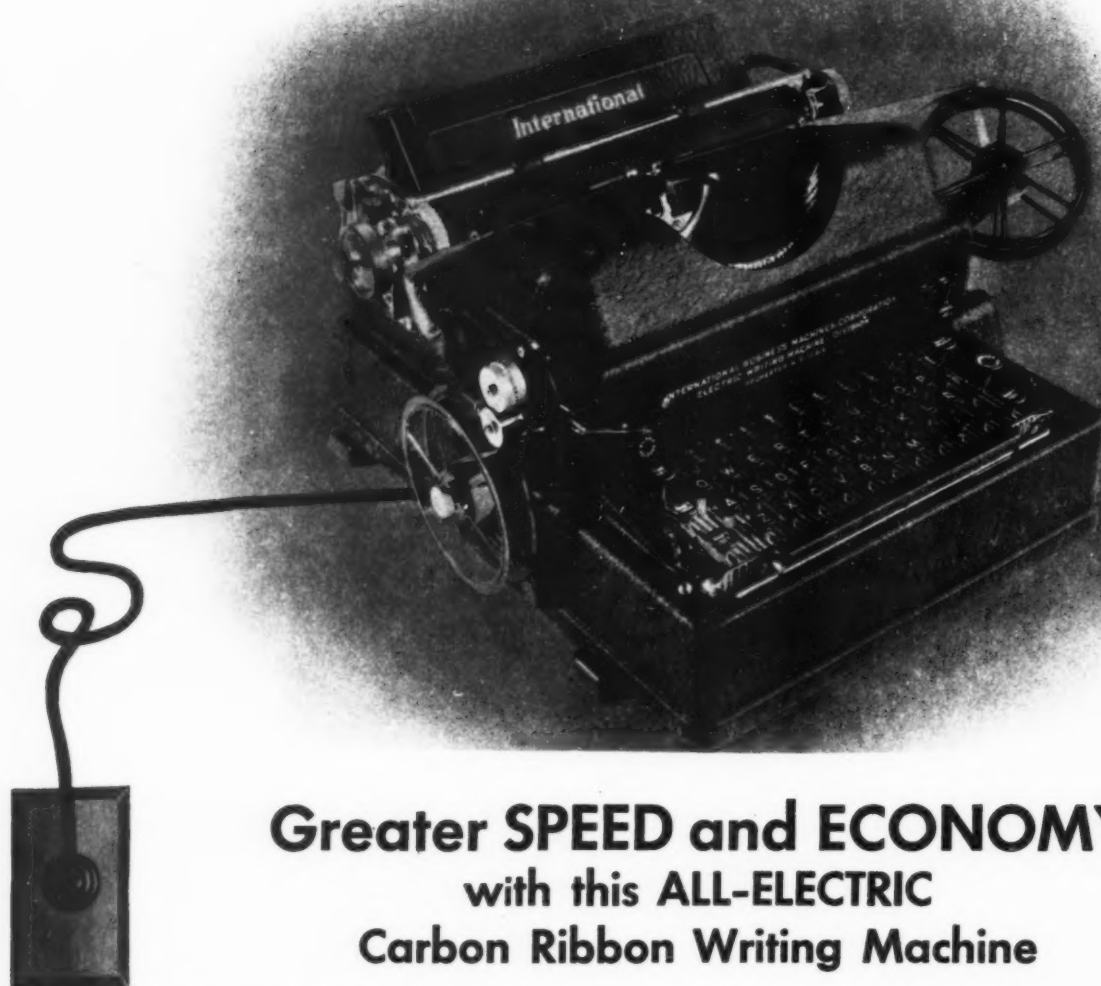
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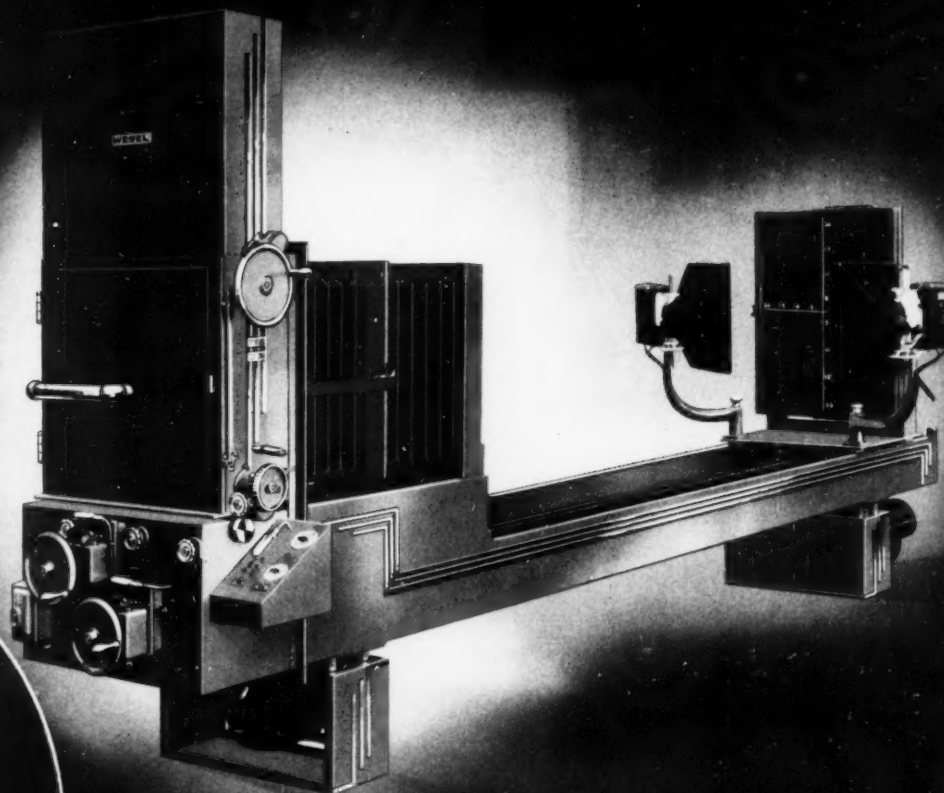
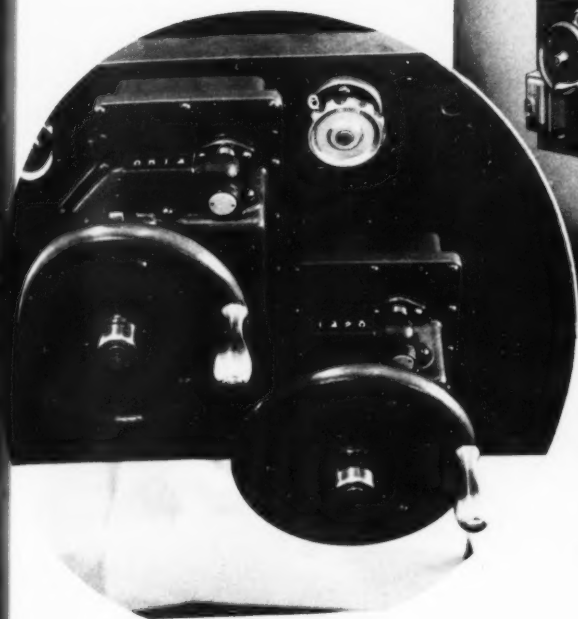
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For Paper and Metal*



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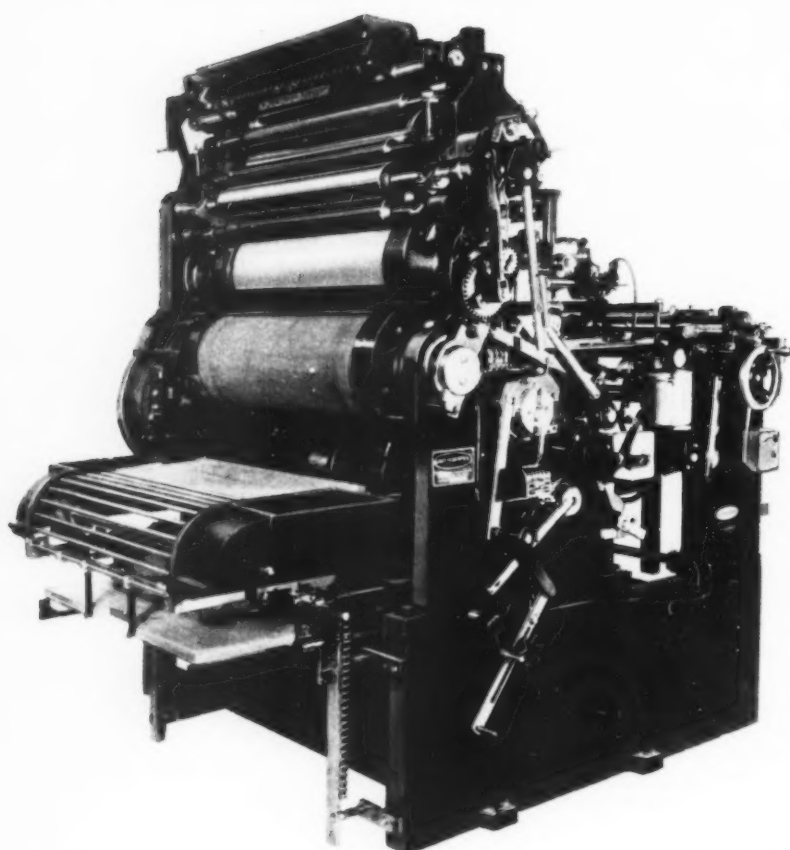
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22 x 29

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November 3, 1936

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We are thinking of installing another press of a larger size and will appreciate your giving us complete specifications price on the 22"x26" machine. Also advise how soon shipment could be made.

It might interest you to know that last week we turned out over a million impressions on our two Webendorfer presses which is quite a record we think. Am glad to attach herewith a couple samples of recent jobs.

Yours sincerely,  
THE GRAY PRINTING CO.  
*Robert Gray*

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NO COST—NO OBLIGATION



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MONOTYPE-HUEBNER

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*Compared to the operation of horizontal coaters:*

### RENT

Occupies less than half the floor space  
— *saving in rent.*

### SOLUTION

Uses less than half the sensitizing solution (in deep etch saves more)— *saving in chemical purchases.*

### TIME

Produces better plates in less time—  
— *saving in power and operating expense.*

### INVESTMENT

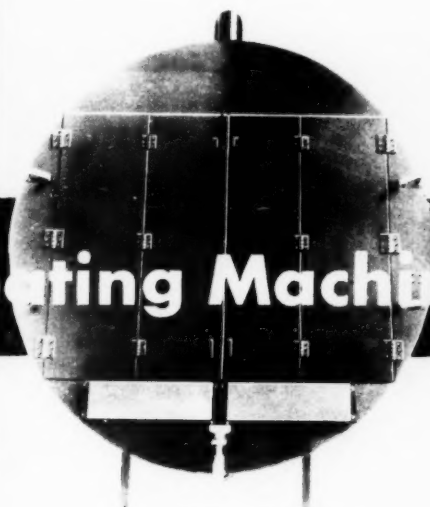
Often saves the need of a second machine  
— *saving in capital.*

.... **Guaranteed**

**LANSTON MONOTYPE  
MACHINE COMPANY**

Monotype Building, 24th at Locust St., Philadelphia, Pa.

MADE IN TWO MODELS



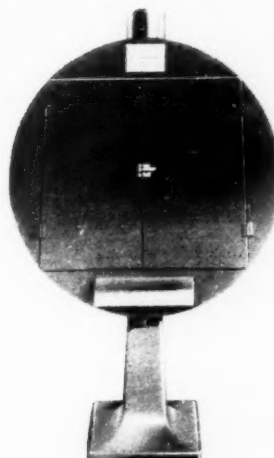
### STANDARD MODEL

Made to coat plates of four sizes

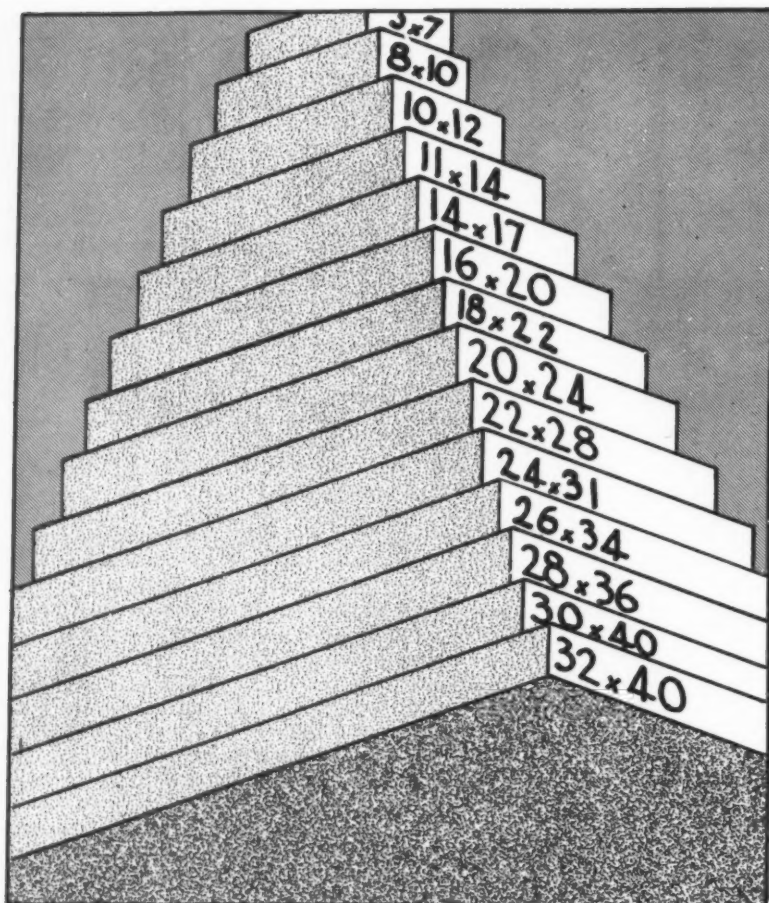
Minimum		Maximum
6 x 8 inch	to	29 x 39 inch
6 x 8 inch	to	36 x 46 inch
6 x 8 inch	to	47 x 57 inch
6 x 8 inch	to	52 x 71 inch

### JUNIOR MODEL

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# THE PHOTO-LITHOGRAPHER

*Published in the Interests of Lithographers to Increase  
Sales Efficiency and Quality*

Volume V

SEPTEMBER, 1937

Number 9

## A "SHARE YOUR KNOWLEDGE" CONVENTION

THE tentative convention program for the National Association of Photo-Lithographers as published in this issue, points to a convention for the benefit of employer and employee alike.

The program has been designed so that employers can take part in symposium discussions on trade practices, costs, selling and the many management problems which every employer today is facing. Regional directors of the association will contribute from their experiences to these discussions as to the status of various areas throughout the country.

Following the excellent example set by Craftsmens Organizations, particularly the Litho Clubs, the convention will utilize lithograph shops' facilities to help share knowledge in the various work operations undertaken in a litho plant. Present plans include technical discussions during which copy will be photographed with various kinds of negatives and the negatives developed, stripped up, opaqued and printed to a metal plate for both albumin and deep etch work. These plates will be placed on a press so that employees who attend the convention can examine at close range blankets, rollers, fountain, inks, paper and press work.

Technicians who are scheduled to conduct these demonstrations include: a representative of the Eastman Kodak Company, K. W. Martin of Harold M. Pitman Company and Summerfield Eney of the Champion Paper and Fibre Company.

### WINNING COVER DESIGN

We are pleased to announce that Ernie Bandhuin, Staff Artist of the Leicht Press, Winona, Minnesota, won first prize \$50.00 in the contest for the best cover submitted for this year's issue of THE PHOTO-LITHOGRAPHER. Mr. Bandhuin's cover design is carried on this issue of THE PHOTO-LITHOGRAPHER.

Major Wallace W. Kirby of the Kirby Lithograph Company, Washington, D. C., will preside over a full morning's discussion on problems of the photo-lithographer.

The Harris Seybold Potter Co. has invited the association to visit its factory and to see its new chemical and research laboratories which have been set up for the benefit of the lithographic industry.

A number of equipment and supply manufacturers have contracted for exhibit space at the convention. The list of exhibitors includes:

Agfa Ansco Corporation  
Eastman Kodak Company  
Hammer Dry Plate Co.  
Philip A. Hunt Co.  
Merck & Company  
Thormod Monsen & Son  
Harold M. Pitman Co.  
Sinclair & Valentine  
Wesel Mfg. Co.

Photo-lithographers who plan to have their key men present at these technical sessions are urged to make early reservations at the Hotel Hollenden, Cleveland, Ohio, since Cleveland will be the host of a large number of conventions in October and accommodations will be scarce if reservation is delayed:

The Hotel rates are:

- Single Room—\$3.00, \$3.50, \$4.00, \$5.00  
Room with Double Bed—\$4.50, \$5.00, \$6.00, \$6.50  
Room with Twin Beds—\$5.00, \$6.00, \$7.00, \$8.00, \$12.00  
Parlor and one Twin-Bedded Room—\$10.00, \$15.00  
Parlor and Two Twin-Bedded Room—\$22.00

Every Photo-Lithographer in the country whether he is a member of the National Association of Photo-Lithographers or not, is cordially invited to attend this "Share Your Knowledge Convention." A liberal education is in store for both employers and employees in the convention. Registration fee will be two dollars each. Please make reservation with the Secretary, National Association of Photo-Lithographers, 1776 Broadway, New York, N. Y.

## FIFTH ANNUAL CONVENTION OF THE National Association of Photo-Lithographers

Hotel Hollenden, Cleveland, Ohio

OCTOBER 14-15-16, 1937

### Convention Program

THURSDAY, OCTOBER 14TH

- 9 A. M. Meeting of the Board of Directors  
11 A. M. Convention called to order  
Roll Call of Members  
Applications for Membership  
Appointment of Committees  
Report of Treasurer—  
George E. Loder  
Report of Executive Secretary—  
Walter E. Soderstrom  
Report of Legal Counsel—  
Captain L. B. Montfort  
2 P. M. A Code of Ethics for the Industry—  
R. M. Collins  
Trade Practices for the Industry—  
J. R. Zimmerman  
Election of Directors for 1937-1938

FRIDAY, OCTOBER 15TH

- 10 A. M. Address of Welcome—  
Paul A. Heideke, President  
Address—"New Legislation and Its Relation  
to the Lithographic Industry"—  
Capt. L. B. Montfort  
12 P. M. Luncheon Hotel Hollenden  
"Color: What It Is and How It Should Be  
Used," by G. L. Erickson, Technical Di-  
rector, Braden-Sutphin Ink Co., Cleveland

- 1.30 P. M. "Building the Harris Press"—Buses will  
be available to escort convention guests to  
the plant of Harris-Seybold-Potter Co.  
Visit to the Chemical and Research Division  
of the Harris-Seybold-Potter Co.—New  
Chemical Developments.  
3.30 P. M. Demonstration of Negative Making\* "Mak-  
ing Color Separations"  
Conducted by The Eastman Kodak Com-  
pany in the plant of Copifyer Corp. of Ohio  
3.30 P. M. Demonstration of Making Deep Etch Plates\*  
Conducted by K. W. Martin of the Harold  
M. Pitman Company in the plant of Horn &  
Norris Co.  
4.00 P. M. Overcoming Press Room Problems.\* Plates  
will be put on the press and run. Discussion  
of cylinders, blankets, fountains, inks and  
press work problems. Plants of Horn &  
Norris Co.  
Conducted by Summerfield Eney of the  
Champion Paper and Fibre Co.  
4.00 P. M. "Estimating in the Industry"  
Discussions led by Wm. J. Volz, Sackett &  
Wilhelm Lithographing Corp.  
5.00 P. M. Stabilization in various areas—Round table  
discussions to consider special kinds of work  
8.00 P. M. Annual Dinner (Informal)  
Address "Looking Ahead With the Litho-  
graphic Industry"—Harry A. Porter, Harris  
Seybold Potter Co.

\*Groups limited in number.  
Demonstrations conducted Friday and Saturday.



## Tentative Convention Program

SATURDAY, OCTOBER 16TH

PRESIDING MAJOR WALLACE W. KIRBY  
Kirby Lithograph Company

- 9 A. M. Technical Sessions—Symposium Discussions  
led by Summerfield Eney, J. Harvey Glover,  
Sweeney Lithograph Co.  
Making Good Negatives—Color Negative  
Work  
Overcoming Difficulties in the Plate Making,  
Stripping and Press Departments
- 12 P. M. Luncheon Hotel Hollenden  
Address "The Significance of Management  
under Present Day Conditions" by Harry  
Arthur Hopf, Managing Partner of Hopf,  
Kent, Willard & Company, Management  
Engineers and Accountants

2 P. M.

Demonstration of Negative Making\* "Mak-  
ing Color Separations"

Conducted by the Eastman Kodak Company  
in the plant of Copifyer Corp. of Ohio

Demonstration of Making Deep Etch Plates\*  
Conducted by K. W. Martin of the Harold  
M. Pitman Company in the plant of Horn &  
Norris Co.

Overcoming Press Room Problems\*

Plates will be put on the press and run

Discussion of cylinders, blankets, fountains,  
inks and press work problems in the plant of  
Copifyer of Ohio

Conducted by Summerfield Eney of the  
Champion Paper and Fibre Co.

\* Groups limited in number.

Demonstrations conducted Friday and Saturday.

## NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

1776 Broadway, New York, N. Y.

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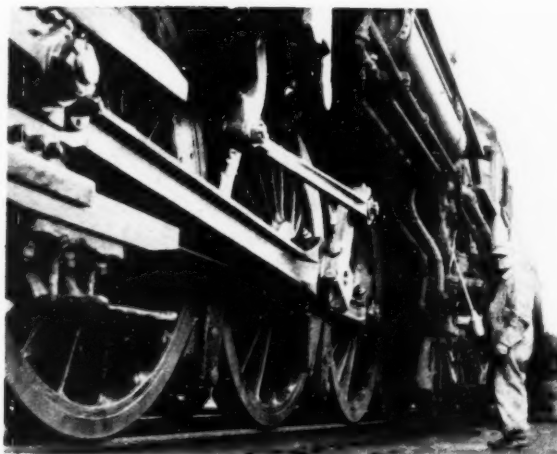
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Oiling up for Cleveland, October 14th

# DEEP ETCH PLATES\*

**"INTAGLIO"** was at one time applied to offset printing from deep etched plates and served to make clear the essential difference between deep etched plates and the more usual planograph plates. In recent years, however, it has been recognized that "intaglio" applies more strictly to gravure printing, and the name "deep etch" has been recognized by lithographers and, to a surprising degree, by buyers of lithography as a distinct method of plate making.

We may define a deep etch plate as a lithographic plate in which the work areas have been treated in such a way that they are slightly depressed below the non-printing area of the plate. The diagrams illustrate the differences between planograph, deep etch, intaglio, and letter press plates.

Figures 1 and 2 illustrate the difference between planograph plates and deep etch offset plates. On the planograph plates, the work is raised slightly above the surface due to the presence of the exposed albumin under the ink. The grained surface on the non-printing areas must be kept damp with water. It can readily be seen that the deep etch plate permits more ink to be carried. The intaglio dot, illustrated in Figure 3, has a smooth surface in the non-printing areas, and is kept clean by a scraper which passes over the plate after the inking mechanism has deposited the ink in the hollows. The letter press dot (see Figure 4) depends on the fact that the metal has been etched away all around it and the inking roller comes in contact with the raised surface only.

The amazing growth of the deep etch process in this country over a relatively short period of time is due largely to its outstanding advantages as a quality process. Its use permits the lithographer to produce very brilliant halftones and to obtain much longer runs from an individual plate. Both of these advantages may well be due to the fact that more ink and less water may be used with deep etch plates. The improved definition of the lines and dots due to the slight etching permits this to be done without thickening the work.

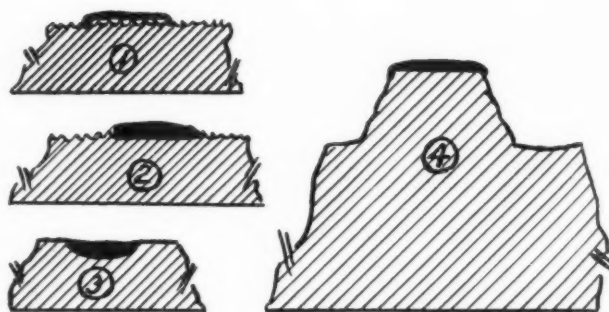
Fortunately, no additional equipment beyond that generally found in a well organized photo-lithographic establishment is necessary for the production of fine deep etch plates. Many photo-lithographers have been making deep etch plates for a number of years without having found it necessary to purchase any additional equipment for this purpose.

As yet, there is no proved method of making a deep etch plate from a negative. The method involving the use of gelatine with iron salts which produce a coating which hardens or becomes insoluble in the dark and be-

comes soluble when exposed to light has not reached a practical stage of development. Methods of preparing deep etched plates by exposing through a negative and then reversing the work after it has been established on the plate seem to be so complicated and to involve so many possibilities of error that they will not be considered at the moment. We will, therefore, confine our attention to the positive reversal process.

Normally, photographic printing produces opposites; that is, a print made from a negative will produce a positive and vice versa. This is true in the case of deep etched plates, but after the negative image has been formed on the plate by a photographic process, the image is reversed chemically so that the final result is again positive. This is illustrated by the diagrams in Figure 5. This reversing process sometimes causes confusion as the results are exactly opposite to those obtained by the normal photographic process. Over-exposure produces too sharp a plate, and instead of opaueing non-printing areas, it is necessary to keep them transparent and free from dirt.

The positive used for deep etch plate making should be, generally speaking, the exact opposite of the negative. However, due to the fact that, as explained above, a



Planograph (1) — Deep-Etch (2) — Gravure (3) and Letterpress (4)  
Dots of approximately the same printing value.

reversal process is used, it is desirable to have the high-light dots (the smallest black dots of a positive) smaller, and the openings in the shadow dots larger than they would be in a negative. This is because exposures necessary to produce a good clean plate might not be sufficiently long to hold the extreme shadow dots open during developing. This is especially true if any fog is present. The extreme highlight dots, however, offer little difficulty provided they are perfectly black. All this means that in making the negative it is only necessary to use a somewhat longer flash exposure in order to open up the shadows sufficiently. It is quite practical, however, to use old

\* This is a condensation of a talk which will be given at the Cleveland Convention by a member of the Technical Staff of the Harold M. Pitman Company. A practical demonstration of the Pitman Process will also be made.

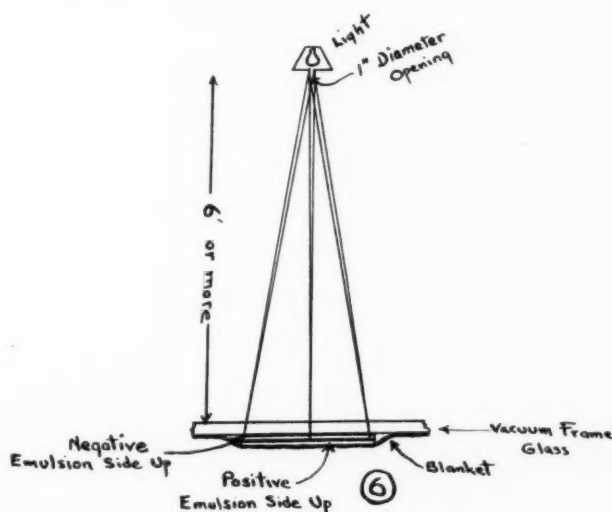
negatives and to make contact positives from them wherever it is more economical to do so.

Positives may be made in the camera or in the vacuum printing frame by contact. Speaking very generally, positives are made in the camera when it is desired to dot etch for corrective purposes. This method is generally confined to color work, the negative being made continuous tone and exposed back through the camera to produce the screened positive.

The increasing popularity of deep etched plates has improved contact printing technique considerably. It has been found that the best results are obtained when the source of light is relatively small and at some distance from the sensitive surfaces. The diagram in Figure 6 illustrates a typical arrangement.

Some confusion may be created when it is observed that the deep etch process, in addition to being a reversal process, requires a reversed positive. The necessity for having a reversed positive can be clearly understood if a piece of printed matter is taken. This will correspond to a positive with the emulsion side uppermost. In order to make a print from this positive it must be placed in perfect contact with the lithographic plate. This requires that the emulsion on the positive and the sensitive coat-

ing on the plate be placed together. If this is done the printed matter will now read from right to left. It might be possible, of course, to use film with an exceptionally thin base and to have the base of the film in contact with the sensitized surface of the lithographic plate, rather than the emulsion. This may work out reasonably well for type and line work but usually presents considerable difficulty when halftone work is attempted by this method. It is generally easier and better to reverse the work during the step between negative and positive. This may be done by placing the sensitive material on the blanket of the vacuum frame with the emulsion side up and then placing the negative on top with the emulsion side also facing up. If a 25 watt lamp is used at a distance of six or eight feet, as indicated by the diagram, an exposure time of from twenty seconds to one minute may be required.



An exposure time of this length permits a much higher degree of control than would be the case if only a few seconds were required, and the fact that the light is received from a very small opening permits the production of good positives although the sensitive surfaces are not in contact.

Recently, films have been put on the market with a clear base (free from a non-halation backing). With this material it is possible to put the film in position with the emulsion side to the blanket and the exposure may be made through the base of the positive rather than through the base of the negative. This permits the use of glass negatives in making contact positives. Negatives for photo engraving purposes must also be reversed and prisms and mirrors are used for this purpose. However, they are not easy to use in a dark room camera. It is also possible to strip and turn wet plate negatives to accomplish the same result.

Good positives, like good negatives, must have dense blacks and be perfectly clear in open parts. For deep etch work it is most important that the blacks be thoroughly

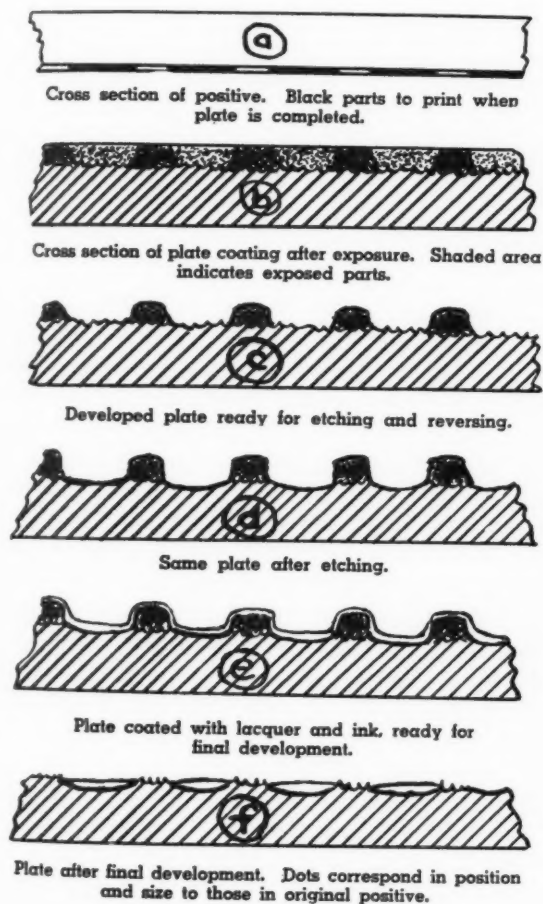


Figure 5



opaque. If any light is permitted to pass, the coating may become light-hardened which would prevent the retention of the work by the plate.

Flats for deep etch work may be stuck up on celluloid or glass. Gummed tapes are likely to pick up dirt at the edges and produce dirty plates; hence, it is customary to stick down the positives with glue. This may be conveniently done by moistening a strip of paper tape and inserting it between the positive and the glass or celluloid support. The two are then placed together firmly and the paper pulled out with a quick motion. The film of glue left behind is quite adequate to stick together the two surfaces. Whenever possible, it is advisable not to get the adhesive in the work areas as trouble with a lack of contact may result. On step-and-repeat work, the positive is maintained in the chase of the machine in the usual way. The masking, however, is somewhat more complicated as it is necessary that the non-printing areas of the plate be completely exposed. At the same time, the exposure for the first shot must not lap over into areas reserved for subsequent exposures. There is generally adequate space between steps so that some over-lapping may be permitted. If, however, the work areas of a job exactly meet, it is best to use tinfoil on the emulsion side of the positive for masking in order to avoid contact troubles.

Most deep etch coatings are somewhat slower than coatings for the negative process and somewhat more latitude in exposure is allowable. With large flats in the vacuum frame, where the lights must be kept at a considerable distance in order to maintain even illumination, exposures of ten to fifteen minutes are not uncommon. Exposures in the step-and-repeat machine vary from fifty seconds to ten minutes depending upon the strength of the light, metal used, and condition of the positive.

Coating the plate with the deep etch coating does not present any unusual difficulties. Any standard counter-etch is acceptable and the whirler should be capable of running at least 50 r. p. m. The deep etch coating is much thicker than the egg albumin coatings and better results are obtained if the plate is whirled at a fair speed. The same amount of light is permissible when coating and exposing the plate as may be used with planograph coatings. It should be remembered, however, that excessive exposure to light will tend to make the work area weak rather than producing a scum as would be the case in the albumin process. After exposure, the plate is developed with a special solution. Two applications of this material are required and the developing solution is distributed over the plate by means of a pad of rough material. After the developing is complete, the cross section of the plate looks very much as illustrated in Figure 5c. As soon as the developing operation is completed, which should not require more than five minutes, the plate is etched by applying the etch solution with a pad similar to the one employed in developing. The etching operation requires only about two minutes, after which the etch is scraped

off and the plate very thoroughly washed with a special alcohol developer. This removes all of the developer and etch solutions from the plate and leaves it in a clean condition very receptive to ink.

At this point, it is possible to remove any dirt or unwanted work from the plate by painting out with the deep etch coating. Thus, it is possible to do a certain amount of color separation work by simply leaving all the colors in the positive and eliminating the unwanted colors at this point in the plate making operation. After the plate has been staged it is only necessary to apply a base or lacquer. This is a resinous material applied in liquid form which serves to give the work areas a substantial base in the plate. It is applied in much the same way as developing ink is applied to planograph plates and is rubbed down thin with a rag and fanned dry. As soon as it is dry, deep etch developing ink is applied with a rag, rubbed down smoothly and again fanned dry. It may be desirable to use powder on the plate at this point to prevent the ink from smearing in subsequent operations.

After the ink has dried sufficiently, the plate is placed under running water or in a trough and the exposed coating is scrubbed off with a brush. Under normal conditions, the coating removes easily leaving the normal grain surface perfectly clean. If any difficulty is experienced due to bad weather conditions, a suitably balanced acid solution may be used to aid in the removal of the coating. The fact that these plates will resist the abuse given by the brushing operation is an indication of their durability as they are not treated with any such severity on the offset press.

After the scrubbing out operation is completed, the plates may be etched and gummed and treated in exactly the same way as planograph plates. It is advisable to wash them out and put them under washout solution if they are to stand for more than two or three days before they are put on the press.

Probably the most frequently repeated question concerning deep etch plates is "How long will they last on the press?" The fact is that these plates are subject to the same variations in press conditions as are any other plates made by different methods. Consequently, although the plates are initially much more durable than any other type of lithographic plate made at the present time, it is possible to wear them out. This is most readily accomplished by improper setting of the press. Too acid dampening water and poorly ground inks are also frequent offenders. Under good conditions, runs of several hundred thousand impressions without any serious deterioration of the image are common. This increased plate life while an important factor, is generally considered to be less important than the accepted fact that the quality of the work obtained is tremendously improved. A smoother and at the same time snappier result is obtained with the deep etch plate for a far greater number of impressions.



# FIRE AND TOXICITY HAZARDS OF LITHOGRAPHIC CHEMICALS

By P. H. STAUB, MERCK & CO., INC.

THERE is an old and true statement to the effect that familiarity breeds contempt. Contempt may be too strong a word, yet there is no question that the daily use of chemical substances, and the relative rarity of accidents occurring through their use, does breed indifference to the hazards involved. Benzol, Ether, Acetone, and other inflammable and explosive solvents are used hundreds of times daily in lithographic plants, and nothing happens. Yet several times a year in some plant the fumes ignite from a spark or open flame causing fire, perhaps an explosion, and sometimes serious personal injury.

An attempt has been made in the following article to point out the fire and poison hazards of the more common chemicals used in the lithographic industry and the simple precautions that will avoid danger.

## *Fire Hazards*

The danger of a fire from chemicals used in the average lithographic plant is not severe if reasonable precautions are taken. It should be remembered that Acetone, Benzol, Carbon Bisulfide, and Ether—the last either in its pure form or as an ingredient of wet plate collodions—evaporate readily. The vapors can ignite easily and sometimes explode from an open flame, a lighted cigarette, or a spark. With the exception of Ether, the fumes of these solvents are generally heavier than air and tend to settle to the floor. For this reason it is safer to keep containers on the floor when open or when pouring from them. If it is necessary to store or handle them on a bench or shelf, be sure that there is no open flame nearby. It is also best to keep containers of these volatile solvents well away from steam pipes, radiators, or any other source of heat.

Certain chemicals, notably Nitric Acid and Chromic Acid, attack any organic material such as paper, rags, wood, or excelsior, with liberation of heat and danger of spontaneous combustion. These materials should be stored in well-stoppered containers and the surroundings kept free of litter which might tend to start a fire in case of breakage. Nitric Acid in particular should be stored in such manner that, in case of breakage or spilling, it can not drip through to the floor below and cause fire or other damage.

Chemicals which may or may not be capable of starting fire of themselves are dangerous during a fire. Nitric Acid, Acetic Acid, and Hydrochloric Acid give off corrosive fumes when heated. Sodium and Potassium Cyanides liberate the deadly Hydrocyanic Acid gas. The

solvents—Acetone, Benzol, Carbon Bisulfide, and Ether—are liable to explode. Caustic Soda or Caustic Potash melt under heat and cause severe burns if they come in contact with the skin in a molten condition.

## *Poison Hazards*

The toxic effects of chemicals may be classified roughly under three heads: effects caused by contact with, or absorption through, the skin; effects caused by inhalation of chemical dust or fumes; and effects caused by the swallowing of chemicals or their solutions. With the exception of skin poisoning caused by careless handling of Chromic Acid and Dichromates, little trouble is experienced in the lithographic industry through normal use of chemicals and their solutions. However, it is well to remember that most of these substances are potentially toxic and that certain precautions should be observed.

Most of the chemicals used in lithography, except for fountain etches and press cleaning, are used at the sink in the photographic or plate making departments. Here the operator's hands are in frequent contact with fresh running water. For this reason little trouble is experienced from skin poisoning. It should be remembered, however, that the following chemicals may cause either skin irritation or poisoning of the system by absorption through the skin:

Acetone  
Benzol  
Carbon Disulfide  
Carbon Tetrachloride  
Chromic Acid and Dichromates  
Cyanides  
Mercury Salts  
Metol (Photol, Pictol, Rhodol, Elon, etc.)  
Silver Nitrate

Furthermore, certain chemicals, in solid form or strong solutions, may produce painful skin burns. Among these are:

Acetic Acid  
Chromic Acid  
Hydrochloric Acid  
Iodine  
Nitric Acid  
Potassium Hydroxide  
Sodium Hydroxide  
Sulfuric Acid.

(Continued on pages 32, 33 and 135)

CHEMICAL	FIRE HAZARD	POISON HAZARD	
		Type of Poisoning	Symptoms
ACETONE	Inflammable. Explosive.	Vapor through lungs. Direct action on skin.	Irritation of skin, eyes and lungs.
BENZOL	Inflammable. Explosive.	Vapor through lungs. Absorption through skin.	Giddiness, sleepiness, muscular tremor, delirium, unconsciousness.
CARBON DISULFIDE	Inflammable. Explosive.	Vapor through lungs. Absorption through skin.	Headache, dizziness, stomach disturbances.
CARBON TETRACHLORIDE	None.	Vapor through lungs. Has caused poisoning through skin.	Nausea, cough, headache, vomiting, dizziness.
CHROMIUM AND ITS COMPOUNDS	Dangerous. <sup>1</sup>	Fumes or dust through lungs. Contact with skin.	Bronchitis, eye inflammation, stomach disorders, eczema, skin ulcers.
COPPER AND ITS COMPOUNDS	None.	As dust or filings through lungs or by swallowing.	Bronchitis, vomiting, stomach disorders.
CYANOGEN AND ITS COMPOUNDS (SODIUM OR POTASSIUM CYANIDE)	Non-inflammable. Releases deadly gas under heat.	As gas or dust through lungs. As liquid or solid through skin.	Acute poisoning: suffocation, nausea, vomiting convulsions. Chronic poisoning: stomach disorders, intestinal disorders, slow pulse, albumin in urine.
HYDROCHLORIC ACID	Fumes when heated.	Gas through lungs. Direct action on skin.	Violent coughing, bronchitis, contraction of throat skin burns.
HYDROFLUORIC ACID	Fumes when heated.	Gas through lungs. Direct action on skin.	Eye irritation, ulceration of nose, gums, and mouth. Caustic action on skin.
IODINE	Fumes when heated.	As vapor entering lungs or as solid in contact with skin, causing burns.	
MERCURY AND ITS COMPOUNDS	None.	As vapor or dust through the lungs, as solid or in solution through the skin, as liquid or solid by swallowing.	Chronic inflammation and ulcers of mouth with increased saliva and metallic taste disorders of stomach and kidneys.
METOL (PHOTOL, PICTOL, RHODOL, ELON, ETC.)	None.	As dust through lungs or as solid or liquid through skin.	Pallor followed by bluish color of lips and finger tips, skin eruptions, weak pulse, urinary disorders.
NITRIC ACID	Explosive. <sup>2</sup>	As gas through lungs and direct action on skin.	Anemia, thirst, cough, albumin in urine, destruction of teeth, skin burns.
POTASSIUM OR SODIUM HYDROXIDE	Dangerous. <sup>3</sup>	Direct action on skin in solid or solution form.	Corrosive if swallowed. Skin burns.
SILVER NITRATE	None.	Crystals cause skin burn.	
SULFURIC ACID	Fumes when heated.	Gas through lungs. Direct action on skin.	Acute and chronic bronchitis, decay of teeth. Skin burns and ulcers.
ZINC AND ITS COMPOUNDS	None.	As dust entering lungs or swallowed, as solutions of salts swallowed.	Headache, cough, nausea, vomiting, chills and fever, profuse perspiration, muscular pains and exhaustion.

<sup>1</sup> Contact with organic matter such as paper, excelsior, rags, etc. liberates heat and is apt to start a fire.

<sup>2</sup> Contact with organic matter such as paper, excelsior, rags, etc. liberates heat and is apt to start a fire. In case of fire, carboys or bottles in which acid is stored may explode and liberate deadly fumes.

<sup>3</sup> Will melt under heat. Liquid caustics will produce extremely severe burns.

POISON HAZARD—Cont.	FIRST AID TREATMENT
Precautions	In all cases of chemical poisoning or injury, call a physician immediately. For first aid, however, the following suggestions may be helpful:
Avoid inhaling fumes; avoid contact with skin.	Fresh air—artificial respiration if necessary.
Avoid inhaling fumes; ventilate rooms where used.	Fresh air—artificial respiration if necessary.
Avoid inhaling fumes; ventilate rooms where used.	Fresh air—artificial respiration if necessary.
Avoid inhaling fumes; ventilate rooms where used.	Fresh air—artificial respiration if necessary.
Avoid inhaling fumes or dust. For prevention of skin poisoning wash exposed parts with 10% solution Sodium Bisulfite immediately after use.	In case of burns, wash with 10% solution of Sodium Bisulfite, followed by a wet compress of Sodium Hyposulfite.
Avoid intake through lungs or stomach.	When swallowed—give emetic of mustard and water followed by whites of eggs beaten up in water.
Avoid intake through lungs or stomach and contact with skin. Important: Acids in contact with Sodium or Potassium Cyanide will release Hydrocyanic Acid—a deadly gas. Avoid mixing the two in any sink or drain system.	Cyanide poisoning requires immediate treatment. Give an emetic of mustard and water. Administer at once a fair quantity of Hydrogen Peroxide or a freshly prepared suspension of Iron Hydroxide made by mixing equal parts of 5% Ferrous Sulfate Solution and 5% Sodium Carbonate Solution. Cold douches to head and spine. Aromatic Spirit of Ammonia.
Avoid inhaling fumes, avoid contact with skin except in very dilute solution.	Acid burns: see Nitric Acid.
Avoid inhaling fumes, avoid contact with skin.	Acid burns: see Nitric Acid.
Avoid breathing vapor and prolonged contact of crystals with skin.	When swallowed—give starch and water.
Avoid intake or undue contact with skin.	When swallowed—give whites of several raw eggs, followed by emetic of mustard and water, followed by a pint of whites of eggs in water.
Avoid intake through lungs or stomach and undue contact with skin.	
Avoid intake of fumes or vapors and contact with skin.	Acid Burns: Wash freely with water at once, then with a solution of baking soda and water.
Avoid intake through stomach and contact with skin of solid form or any but very dilute solutions.	Alkali Burns: Wash with water at once, then with a 5% solution of Acetic Acid, or with diluted Vinegar.
Avoid prolonged contact.	When swallowed—give salt and water.
Avoid inhaling fumes, avoid contact with skin.	Acid burns—see Nitric Acid.
Avoid intake through lungs or stomach.	Do not give emetics, but lukewarm water or milk, and strong tea.

(Continued on page 135)

# SELLING PHOTO-OFFSET LITHOGRAPHY

## THE SEVENTH OF A SERIES OF "BRASS TACK" ARTICLES

By WILLIAM WOLFSON

**S**KYROCKET to success by means of demonstrative selling! The right kind of demonstrations add vivacity; you feel you are truly awake and on the job. You work along intelligent lines and this, by itself, tends to keep you away from soporific monotony of the usual.

However, I wish to comment on the preceding installment. This I discussed with one of the active heads of a long-established large photo-offset outfit. After I had outlined the color-kit scheme he remarked "Oh, yes! stunt selling! And suppose it accomplishes the purpose intended. Suppose that the salesman does get in. What is he going to do then?"

The word "stunt" is a colloquialism that has found its way into the dictionary, and is defined as "a feat or performance that is striking for the skill, strength, or the like, shown." So what? According to this definition the star salesman exercising a greater skill or ability than his fellows may be termed a stunt man. Nevertheless, I do not believe that was what the gentleman meant. His tone was belittling; and the reason, I think, was since the method advocated was beyond the conventional, outside of routine, he had never given it much thought and dismissed it as "tricky."

But is it tricky when this same executive invites groups of advertising and production men to be conducted through his very fine plant? Certainly, something is shown, exhibited, *demonstrated*.

I should like to refer this gentleman to an item published in *Sales Management*, July 1st, 1937, written by a salesman and entitled "Ten Things I'd Like To Train My Boss To Do." I especially call his attention to the tenth terse paragraph which reads, "To study the methods of the ace producers—discover the 'how' and pass it on as a help for the rest of us."

I also refer him to previous articles in this series for answer to the question what is the salesman to do once he gets in. *He will learn that demonstration may be employed in all stages of selling*—as entry wedge, as speedy cultivating device for closer intimacy, as business producer.

Now, I realize there may be difficulties inherent in the color-kit idea described last month. It may be too expensive a proposition to give away, the house might not

stand for it. What is to prevent a salesman from making up just one kit, playing with it until he perfects his demonstration and then using it for his own demonstrations?

At any rate, no one need follow the suggestion given. Readers were merely shown how to develop demonstrations. And they may succeed in planning even better ones—although the color kit is new and has never been used.

Rarely is one demonstration all-sufficient. You should have a number of them on tap. Only then can you make repeated calls effective. You must appear before prospects and customers as a man with practically unlimited knowledge, able to entertain educationally with your demonstrations. They will remember you through these.

But you must plan and plot your own demonstrations. I have shown you how some are built up. It only remains for me to give you further hints.

*What to Demonstrate:* You will find plenty of ideas and material in the "talking points" of your "selling talks." You convert these into more than oral delivery. You supplement speech, fortify it, by engaging other than the hearing of the people you interview.

Are you aware of the strong features of your house? Manage to impress these on the minds of your prospects and customers through proper demonstrations.

*What Demonstrations Involve:* An idea in harmony with your own proposition now being exploited in the ordinary fashion. A thorough plan. Needed accessories. A try-out. Modifications made when necessary. Finally, much polishing, improving and refining.

*Function or Purpose:* So as to avoid confusion, you must know what any contemplated demonstration is to accomplish. The color-kit idea was a specific one. The type of prospects, the kind of work to be solicited, how to "get an in," were considered in this demonstration. Once in, further follow-ups were necessary.

On the other hand there was continuity in the demonstrative plan first outlined early in these articles: that of gathering a circle of business executives interested in viewing an assortment of direct-mail pieces produced by your house. These were to be periodically exhibited by



THE PHOTO-LITHOGRAPHER



the salesman. You will remember that the salesman was to mention approximate or exact prices in various quantities. Such plan was designed eventually to produce orders. By itself the plan possesses merit. It stands firmly upon its own feet. Yet, for the spice of variety, coordinated demonstrations might be introduced occasionally.

*Types of Demonstrations:* Apart from demonstrations requiring props, there is a very subtle form of demonstrative selling. In this the salesman talks—but along altogether different lines than usual.

"Demonstrate" comes from the Latin *demonstrare*: to show; and is further defined "to make evident by reasoning," "to establish beyond the possibility of doubt." This is exactly what the right kind of "talk" does.

Where a salesman offers a new device, his best bet is to exhibit, to show how it works. Thus, he demonstrates. In so doing, he always puts proof before his prospect. Results are seen. Because the prospect instead of depending on your claims alone and having to take them for granted faces the kind of evidence that satisfactorily proves to him the existence of every thing about him—through *all* his senses—he convinces (and sells) himself.

Every salesman demonstrates. When he shows samples of work produced for his house. When he submits testimonial letters from satisfied customers. Etc. Therefore, demonstration is nothing new in selling. When demonstration is practiced in higher degree and as a fine art, however, there is further progress, speedier advancement, greater volume of business secured.

I have mentioned a subtle type of demonstration. This is based on knowledge and experiences acquired by the salesman, which he conveys to prospects. Here again, permit me to point out that the trite, the ordinary in knowledge and experience will not do. Perhaps I can make this clear by an example or two.

For instance, how often are salesmen asked after they have put in an estimate for a photo-offset job in black ink what the extra cost would be for simple two color work. You know, too, that a moderate quantity of several thousand copies means the customer has to pay practically double the amount of the estimate for black ink only. Paper, composition, art-work, etc. is the same; still the charges for extra camera work, additional plate, double the impressions, wash-ups, make-ready and other factors balance the savings of paper costs, etc.

When the customer learns what the extra charge for another color is, he is prone to stick to black ink only. The salesman is content to let well enough alone. Were the salesman to cite definite instances of better results secured through the use of a second color; were he able to prove that an extra color pays very profitable dividends, he would be in a position to get more color jobs.

But the salesman never had the experience. He does not know whether extra color pays or not. Although he may not have worked on the inside—in an advertising department, for instance, where tests were made—nevertheless

he can find out from a number of sources. There are salesmen, novices and seasoned men, who devote a good deal of time to reading about salesmanship; and they spend very little time in research, digging up facts, experiencing things, thinking much and correctly. No one individual can experience everything, but he can make the interesting experiences of others his own through thought; he can deliberately put himself in the way of new and vital experiences every day. As a matter of fact, he adds to his mental make-up being alert and viewing his everyday activities—intently, studiously. Here is an important truth which you have forgotten: when you are indifferent to anything, no matter what it may be, that thing is dead and does not exist for you.

Therefore, widen your interests. Reread what I have written regarding the expansion of your sphere when dealing with people. Do not make yourself act within a small restricted circle of routine. Make the interests of individual prospects and customers your own. Meet them on their own mental plane and you will be surprised at the reaction.

If you will pardon a recent personal experience, let me tell you what happened to me last month. I had occasion to make a call on the president of a large company who requested that a representative of our company call. When I arrived, he was in conference and could not be disturbed. The next day I telephoned for a definite appointment. It was 1 p. m., and my man stated if I could be there by 1.30, he would give me half an hour.

I dashed out, was there by 1.30, and settled down to discuss his requirements. We had a very lively discussion pertaining to various matters. I was there a long time. Finally, I looked at my watch and was surprised to see the time was 4:30. I expressed a desire to get back to my office, and my man said:

"Sorry I cannot give you any immediate business, Mr. Wolfson. I want to think a little more about what I have in mind. But let me tell you something. When you telephoned me, a dear friend of mine was in the city and I wished to see him off a little after two o'clock. I so enjoyed your visit, and I learned so many things of value, that I did not mind missing my friend."

Mind you, I never met the gentleman before. And I was gratified when a few days later, he responded to a follow up letter stating that he had completed his survey of needs and was ready to place the business with me. His ending paragraph, which immediately follows, is of interest to those of my readers who are inclined to perfect themselves in the Cadoo system of selling:

"While I would look forward with a great deal of pleasure to spending some more time with you talking over things of mutual interest as we did last time, I nevertheless do not have the nerve to ask you to again call upon me (send a salesman and I will give him the order) unless you find it convenient to do so, in which event I assure you that it will be a great pleasure."



# Sticking to Orthodox Rules

## IN MODERN LAYOUTS

B. EDWARD C. STERRY

IF modernism in typographic design serves no other purpose than just to be "modern," then it serves no useful purpose at all. In our efforts to build modern layouts it is both refreshing and stimulating to get back to the fundamental reason for printed literature.

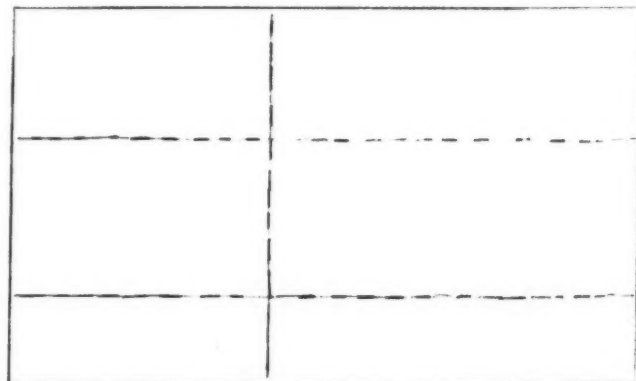
One of the most productive forms of advertising and selling is personal solicitation. But it is simply physically impossible to tell all your prospects about your wares by word of mouth. Therefore your sales messages must be duplicated many thousand times by the printed or lithographed word.

Now, in elementary language, these messages must first of all be attractive, but only to the point where the reader will start reading and continue to read in the sequence and manner which will give him the story in the way in which the advertiser intended. Yea . . . in a manner in which he (the reader) will be influenced toward a purchase either now or later.

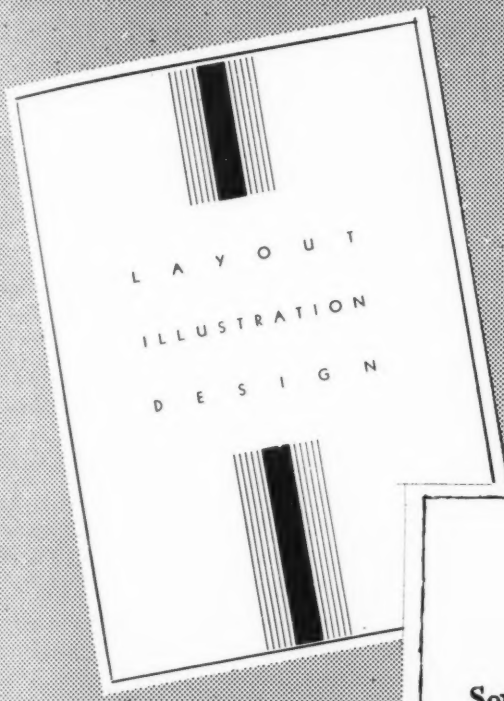
Example A on next page shows a reduced reproduction of an actually printed announcement sent out by an artist

and layout man. The heavy black rules are just modern and that's all. They serve no useful purpose. They almost completely overbalance the wording and cause the eye to be drawn away from the message, which is basically wrong. If this design is held at arms length and viewed through the half-closed eyes, the three lines of type completely vanish, leaving only the two black columns. The normal eye receives just such a subconscious impression. Compare this specimen with the suggested change. Layout (B) Give each one the "eye test." Note that the basic layout has been changed but very little. The type has been set in the same measure though the sizes varied. The same strong verticle axis has been retained. In the suggested revision a certain rhythm has been established by the repetition of rules and spots, both of which take the eye *through* the message instead of away from it.

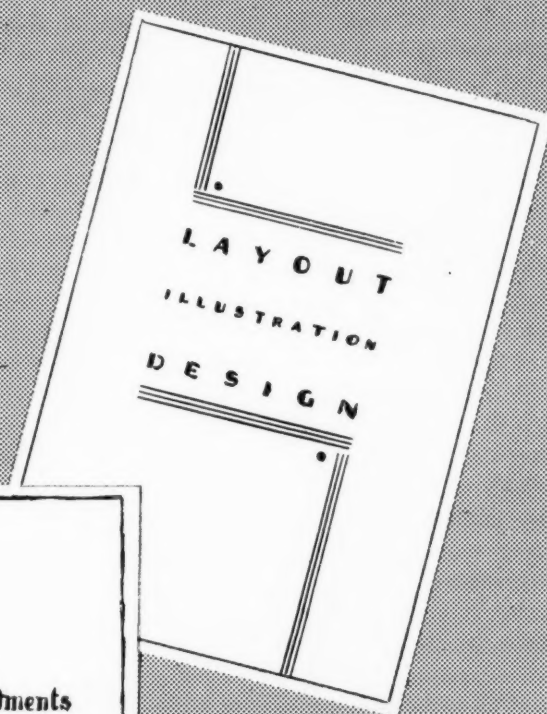
In example C the centered or symmetrical (conventional) arrangement suggests stability, therefore a layout like this is suitable for banks and financial institutions if the copy is written around an institutional theme. In this



This layout presented a problem. A space with a strong horizontal axis, an illustration decidedly vertical, and a short line heading. Here the modern format comes to the rescue. The same material would have been more difficult to arrange in a conventional mode. Note that the skeleton of this composition produces unequal division of space, yet is harmonious in shape . . . the keynote of modern layout.



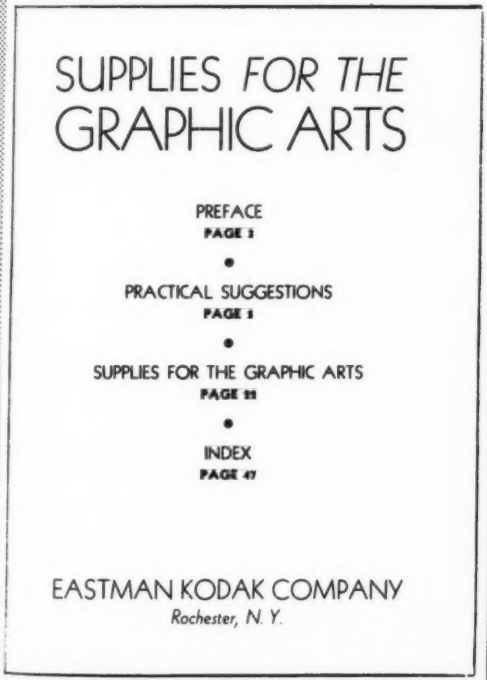
A



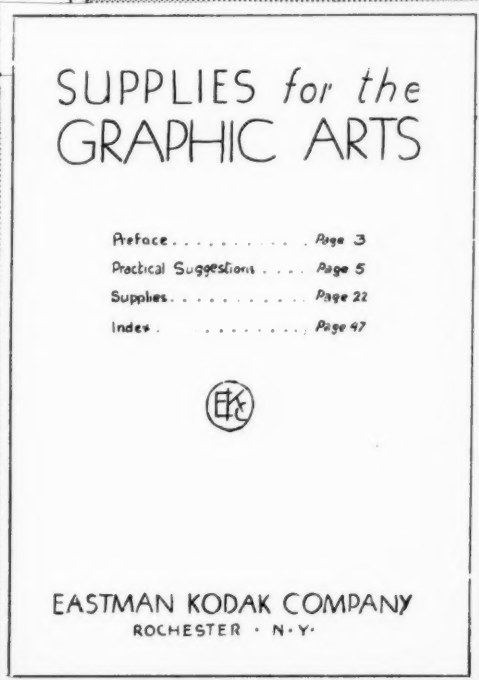
B



C



D



E

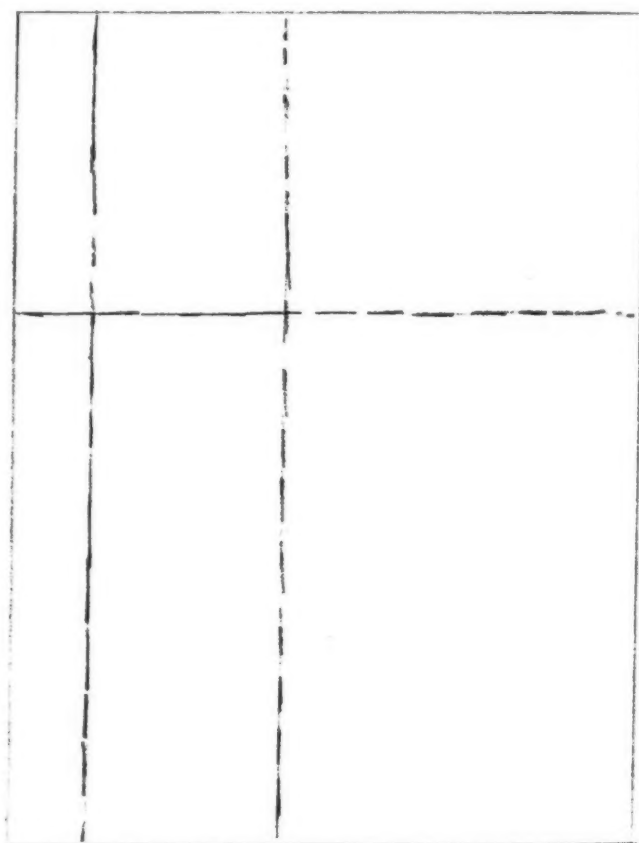


layout the money bag is the focal point which first gains attention. A full measure line in the heading and signature creates a stable appearance, and the two columns of text suggest "architectural structure." The tapering of each column makes an interesting treatment, keeps the arrangement from becoming too severe, and directs the eye to the name of the bank. Caps and small caps always add dignity.

Illustration D shows a slight flavor of the modern, but has become too spotty and offers some resistance in reading. Italics for the most part should be used only for emphasis. The reverse of this is also true . . . italics used in upper and lower case can be made to lend emphasis to the balance of the line. In the suggested revision, example E the measure has been widened a little to allow wider word-spacing. Word-, letter- and line-spacing should be given special attention in the lighter sans serif types. In the original set-up the spots and lines of varying length cause a "jumpy" effect which is irritating to the reader. The first essential in any typographical design is ease and comfort in reading, without which the whole purpose of the message is a failure.

Layout then is responsible for drawing the eyes to a particular advertisement. And the principles of layout . . . design, balance, harmony, proportion, rhythm, contrast, being the component parts of the whole, are responsible for carrying the reader through the story. It is up to the copy, of course, to leave the reader "sold." All the virtues of good layout cannot be found in any one printed piece. If however they are not observed to the greatest degree possible, the best that printed advertising can hope for is a mediocre audience, which inevitably means loss of sales.

These principles of presenting the printed or lithographed message are not new. They are simply borrowed from the time-honored successful salesman who developed them long before the present day science of printed advertising came into being. Attractive layout is just a play on the human emotions . . . the appeal of neat dress, attractive colors, a smile, eye appeal. For after all typographical design is salesmanship on paper. The modern school of layout teaches all of these orthodox principles, but applies them in a different way.



Modern layouts are based on an imaginary skeleton embodying unequal divisions of space and geometrical areas which harmonize in shape. Note the strong vertical axis in this layout and the skeleton on which the design is built.



#### SEND IN YOUR SAMPLES

*Subscribers to THE PHOTO-LITHOGRAPHER are urged to send in samples of offset to be reviewed from a layout and design standpoint. A self-addressed and stamped envelope must be enclosed with the samples if a reply by letter is desired. Only specimens sent in under the name of the subscriber can be reviewed.*

I make this as a very definite statement in an effort to clear up in the minds of the layman (and some layout men, artists and compositors) the mistaken idea that the modern and so-called ultramodern layout is just a mixture of heavy blacks, angles, vertical lines or "something." It is true that modernism in layouts went to the point of insanity a few years back, and that legibility and readability were sacrificed in favor of gaining attention through grotesqueness. But happily this trend has adjusted itself to where today's layouts, generally, have just enough of the modern to make them attractive . . . the sanity to command attention, and the readability to carry the reader through. A few minutes spent with the advertising pages of a few national magazines will substantiate this.

However, one remarkable thing has taken place in the transition period from the conventional to the modern, and that is the selection of type faces appropriate to the subject. This is one phase (and perhaps the only one) of modern layout which, in my opinion, has not yet properly adjusted itself.

As short a distance back as 1929 an advertising layout under fire of critical analysis would have been either rated high or rejected entirely on the selection of type face in the spirit of the subject advertised. Now we find Cooper Black talking about pink lingerie (a type which belongs chiefly in hardware catalogs) . . . and . . . Eve Light trying to tell you of the merits of a new cement mixer. Oh, ye moderns!

Nevertheless, with all due respect to the present seemingly (and often actual) inappropriate application of type faces, it must be admitted that the modern layout possesses that essential power of gaining attention and holding the reader in this galloping age. And judging from the steady increase in space, advertising must be "selling."

The extremists alone are responsible for the present day trend in layout. They have had their fling and have left in their wake a school of thought and practice which has definitely established itself. "Around and around she goes" says Major Bowes. Tomorrow may see the start of a new trend, but, like the orthodox school, the principles of which still hold good, "modernism" in layouts will always be with us.

If our new types which are continually popping up on the horizon are specified with discretion, they will never outlive their usefulness, and will never find their way to a dust-laden case awaiting the melting pot to take on a new form. I want to invoke an earnest plea to both the letterpress printer and the photo-lithographer for the conservative use of our modern types (and all types for that matter). Let us diligently study their use. Apply them

where they will best express a desired thought. Many of us are prone to use a new type just because it is new . . . to be modern just to be modern. But if we closely study the appropriate use of these new type creations and decorations, they will last us much longer and serve us better than if used without due regard for what they are capable of expressing.

Now, back to the conventional, for a moment. Regardless of the myriads of modern faces, Caslon, in either old style or recut, is still the most beautiful and most legible type in the world, with the Goudys a close second, and Scotch Roman and Bodoni Book not far behind.

Generally, the sans serif letter (one of the earliest in the modern mode) is not easy to read in body matter and should not be used unless it can be line spaced at least equal to its body size. This difficult reading of the closely spaced sans serif type in text is substantiated by the fact that book publishers still stick to the more conventional types like Bodoni Book, Elziver, Scotch, Century, etc.

Again I invoke an earnest plea not to stray too far from the orthodox field. The grass on the other side of the fence may look greener, but it may contain a lot of thorns and thistles that you can't see. To be sure, the smartest layout men have gone modern, but not at the sacrifice of readability and appropriate treatment. They are still combining the elements of layout into one potent selling force . . . salesmanship on paper.

In photo-lithography this salesmanship on paper is no less a factor in any other process. In fact, the opportunity for building dynamic, sales-compelling pieces is even greater than by other processes. If the photo-lithographer fully grasps the sales opportunity of photo-offset he will create and build sales literature for his customers that can be duplicated by other processes only at increased expense. To give his clients the full benefit of photo-lithography, and himself the edge on competitive methods, he must constantly make suggestions in the form of layouts and ideas profusely illustrated, and designed to stimulate his customers business. With the cost of illustrations reduced to a minimum, the layout man co-operating with the offset salesman can run rampant with ideas for combining pictures and story.

We've got to keep pace with the times. Otherwise we may find ourselves weighed down by a tombstone sooner than we expect. But the modern will be much more lasting and profitable if we stick to some of the orthodox rules and apply them in a modern manner. The best layouts always have been and always will be those which gain the reader's attention and cause him to read the entire message in a spirit appropriate to the subject advertised. If they accomplish this, and, in doing so, induce the reader to purchase, it matters little whether the layout be conventional, modern or futuristic.

The next article in this series will discuss the working layout and how it cuts costs in composition and preparatory work in photo-lithography.

# PHOTO-OFFSET CAMERA OPERATIONS

By THEODORE S. HILLER

## The First of a Series of Articles on Camera Operations

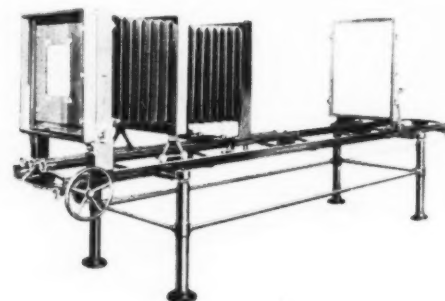
**B**ECAUSE of the great importance of photographic operations in photo-offset lithography it is the desire of THE PHOTO-LITHOGRAPHER to present a series of articles on this phase of the production problem.

Throughout the extent of these articles, entitled "Photo-Offset Camera Operations," the author will endeavor to give as far as possible a clear and concise description of the practical methods in use by practical operators throughout the industry.

The application of these methods and formulae can be successfully made in any plant by carefully adhering to the procedure described herein.

One point, however, cannot be emphasized too strongly—the reading of any treatise, whether it be semi-technical or technical, in a more or less transitory manner, is by no means learning any process. Nor can the ability to produce a high quality job be accomplished without much experimenting and practical applications of the procedure, within sound and thoughtful chemical and physical lines. Endeavor, therefore, to become intimate with the procedure outlined and apply it practically. Time consumed through practical experimentation is never lost.

Photo-Offset Lithography is fundamentally a photographic method of reproducing numerous copies of any given original. Originals are classed as line originals or continuous tone originals. Line originals include any black and white or colored solids, or lines which are to be reproduced in black or colored ink on paper of any color. Line originals can be prepared by typewriting with an ordinary or special typewriter; by printing (proof press impressions or press impressions—cylinder press impressions being superior); by hand lettering or drawing with



A Modern Camera

pencil, pen, brush, crayon or charcoal; by stippling; by Bendaying or other means of shading and tinting and by any other method of preparing an original of two contrasts; namely, black and white.

Continuous tone originals include those which contain any of the intermediate tones between black and white as shown on a gray scale.

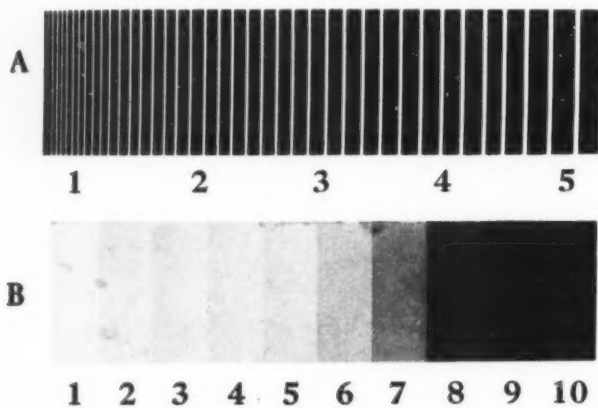
All photographs, wash drawings and pencil shadings are known as continuous tone originals while oil paintings, water colorings and pastel paintings can be considered as colored continuous tone originals. Because of the offset method of transferring the image from the press plate to the rubber blanket and retransferring the image from the rubber blanket to the paper, a continuous tone original must be photographed with the aid of a halftone screen which produces a halftone screened negative.

Because photo-offset lithography is primarily a photographic process light plays an important part by its actions upon the sensitized surfaces.

The first step in photo-offset lithography is to make use of the reflected light from the original on the copy board by exposure of the sensitive medium in the camera. When the negative is completed and in proper position with relation to the sensitized press plate, direct light is utilized to expose the sensitive surface under the more transparent portions of the negative, in order to form a foundation for the printing image.

In order to reduce exposures and produce sharp negatives and sharp printing images, strong lamps such as the open type flowing arc lamps are employed. The single type is most generally used at the camera and the double arc (to give more even distribution of light) is used at the printing frame.

Although the negative is only a means to an end, the preparation and production of a suitable negative entails many operations.



Copy Board Chart



Logarithmic Scale

Since the science and trade of photography can be divided into many branches, the author's reference to "photography" is as it applies only to Graphic Arts. The general heading of Graphic Arts can be further divided into three main groups, namely: Photo-Engraving, Photo-gravure and Photo-Offset Lithography. Since there are variations in the methods of production and the type of negatives used in each group, emphasis is here placed on the Camera Operations as applied singularly to photo-offset lithography.

Although it is often the plight of the camera operator to handle the camera to which he is assigned, the choice of a particular camera by the employer should be made with definite specifications in mind. The photograph shown herewith illustrates the most generally used dark-room type of camera.

Rigidity, freedom from the effects of vibrations, ease of operation, of a size large enough to occupy a moderate sized original and negative and constructed so as to produce a sharp negative at any setting, are a few of the essential requirements of the camera. Regardless of the type of camera employed, whether it be a horizontal pedestal, an overhead suspension or an automatic focusing type, it must possess the above specifications if its use is to be economical and profitable.

Realizing that metal is strong, rigid, is not affected by moisture, and can be molded into light forms, leads the author to prefer a metal camera to a wooden one.

The lens with which the camera is equipped should be a type which is guaranteed free from any astigmatism or flaws and of a focal length long enough to produce a sharp image at the four extreme corners of the largest negative used in the camera. The most generally employed size is the 18 or 19 inch focal length achromat or apochromat

lens. The former type (achromatic lens) is used when all the originals are black and white, whereas the apochromat lens is fully color corrected and colored originals may be reproduced sharply in focus. Where color separation negatives are to be made or any accurate color register is involved, the choice of a fully corrected lens is imperative.

The line and halftone negatives produced by the photo-offset photographer are definitely of the contrast type. The emulsion (coating on the paper, film or glass base) used, produces a strong contrasty background and a clear open line which is free from fuzz, grain or fog.

Continuous tone color sensitive emulsion is used when separation negatives are necessary. This emulsion produces a soft highlight with an abundance of detail in the middletones and shadows. The highlight is the densest part of the negative; the middletone is the more translucent or gray portion, while the shadow is the clear or most transparent region.

The emulsion required may be coated on any one of three bases, namely: paper, cellulose acetate film, and stripping and non-stripping glass; permanence of size, clearness of fine lines and type of copy to be reproduced determines the character of the chosen base. The color of the original also determines whether, regular (non-color sensitive) emulsion, orthochromatic (yellow, orange sen-

(Continued on page 128)

Order No. _____		Date Due _____	
Customer's Order No. _____		Date Received _____	
Plate # _____	NAME _____	ADDRESS _____	
Title of job _____			
No. of Copies	Foot of Page	Work Size	Trim Size
A			
B			
C			
D			
E			
REMARKS _____			
A _____			
B _____			
C _____			
D _____			
E _____			
CAMERA		STRIKING	
Reductions _____	Page Nos. _____		
Enlargements _____	Inserts _____		
Inserts _____	Misc. _____		
See Sample _____	Print & Turn _____	PLATE	
Page _____	Bleeds Print & Turn _____	Color Sample _____	
Cut Single _____	BLINDING _____	Stock _____	
Fold _____	Covers _____	COPY INFORMATION	
Collate _____	Typing _____		
Wire Stitch _____	Comp. _____		
Round Corners _____	Rules _____		
Die Cut _____	Holes _____		
Punch _____			
Date Shipped _____	Packing _____		

A Suggested Job Ticket



## SELECTING A PAPER FOR COMBINATION WORK

THERE should be no need to point out the importance of paper to photo-lithography. Paper forms the basis and the background of every reproduction. Paper can make the difference between a blurry, spotty result and clear-cut, convincing, faithful reproduction. Yet sometimes when striving for better negatives and better plates and better inks, we forget that all the preliminary steps lead to the final important step when the ink is transferred from the blanket to the paper. If the paper is not good, the effect of the preliminary steps will be marred.

In order to produce an economy product in combination runs, the use of a # 4 sulphite bond is imperative. Not just any # 4 sulphite, but the best that is available, for the best of that grade is not too expensive. It is poor economy to spoil a job in the last operation by using a stock of sub-standard quality.

When a customer receives a job printed in combination on cheap paper he will seldom recognize wherein the fault lies. He will blame the process of reproduction and turn to letterpress. If he does realize that the fault lies in the paper, he will again turn to letterpress so that he can select his own paper. Consider the customer's point of view. He is persuaded to use photo-lithography in order to save money. He appreciates the economy of the process. Nevertheless he is bound to have the feeling that the job is somewhat out of his control because his job is being reproduced with a number of others and he cannot select his own stock. Therefore, he is going to be doubly critical of the result. If dissatisfied he may not reject the job. He will simply blame himself for having tried to save money with unsatisfactory results.

The economy of photo-offset combination work is now fairly well known to buyers. The next step is to work for better quality without losing sight of the economy factor. Choose a twenty pound bond that will please your customer.

For the average run of combination work an expensive stock would be an extravagance. For forms, memoranda, leaflets, form letters and reprints which make up the greatest part of combination work, the first appearance is the important thing. Good appearance is essential, but permanence is seldom a factor.

Investigate the tearing strength and the pop strength of the paper you select, in order to avoid a paper that is actually flimsy, but remember that these are minor factors. Be sure that the stock will fold well because a certain percentage of the material you produce will be folded. But most of all look for appearance.

Select a paper that is pure white with a tendency toward blue rather than grey or yellow. The whiter the paper the cleaner will halftones and fine lines appear.

Opacity is important in paper because many jobs are lithographed on both sides of the sheet. Twenty pound sulphite bond is not completely opaque and it is well to inform a customer of this if he wants a heavy ink coverage or reverse plates on a sheet which is to be lithographed both sides. The house which offers at a slightly higher price an alternative heavy stock for combination work has an advantage in this respect.

Select a uniformly clean paper: A few specks are inevitable but avoid a stock full of spots and blemishes. The effectiveness of an illustration is often spoiled by a spot in the paper which crops up in the wrong place.

Feel the paper to see that it has good body. Does it have a fresh, starchy appearance or does it appear limp and feeble? Shake the paper and see if it has the crisp crackle associated with a good bond stock. See that the sheet is finished uniformly on both sides. Finally, buy your stock from an established paper house which will supply you with a uniform quality of paper year after year.

As we mentioned previously in this article, a good # 4 sulphite bond is and will probably continue to be the standard paper for combination runs. It is a useful stock for which there will always be a market when price is the main consideration. The time has come, however, now that photo-lithography is well established, to build a larger volume of business by making a strong bid for quality work in combination runs. This means heavier bonds, offset papers and colored stocks. For the plant operating small presses this presents little difficulty. When large presses are used it is more difficult to secure sufficient business to make it profitable to offer a selection of papers. Some of the larger houses are pioneering in this direction and offering a limited selection of better grade papers on an extended time schedule. A few others have tried without success and given up.

The first step in planning combination runs on stocks other than twenty pound bond is to urge your customers to pay a little more for quality work when they have enough jobs at one time to make up their own combinations. Talk to them about the better results secured with fine papers. Teach them to select papers with an eye on what purpose they are to accomplish rather than on price alone. People pay more attention to material reproduced on quality paper. You will be able to get some of your customers to plan their work far enough in advance so that several jobs may be run together. Gradually, if you are sufficiently persistent you discover that sufficient demand has sprung up for a heavy stock to justify your running it on a regular schedule. The expansion of the industry is going to come mainly from an improvement

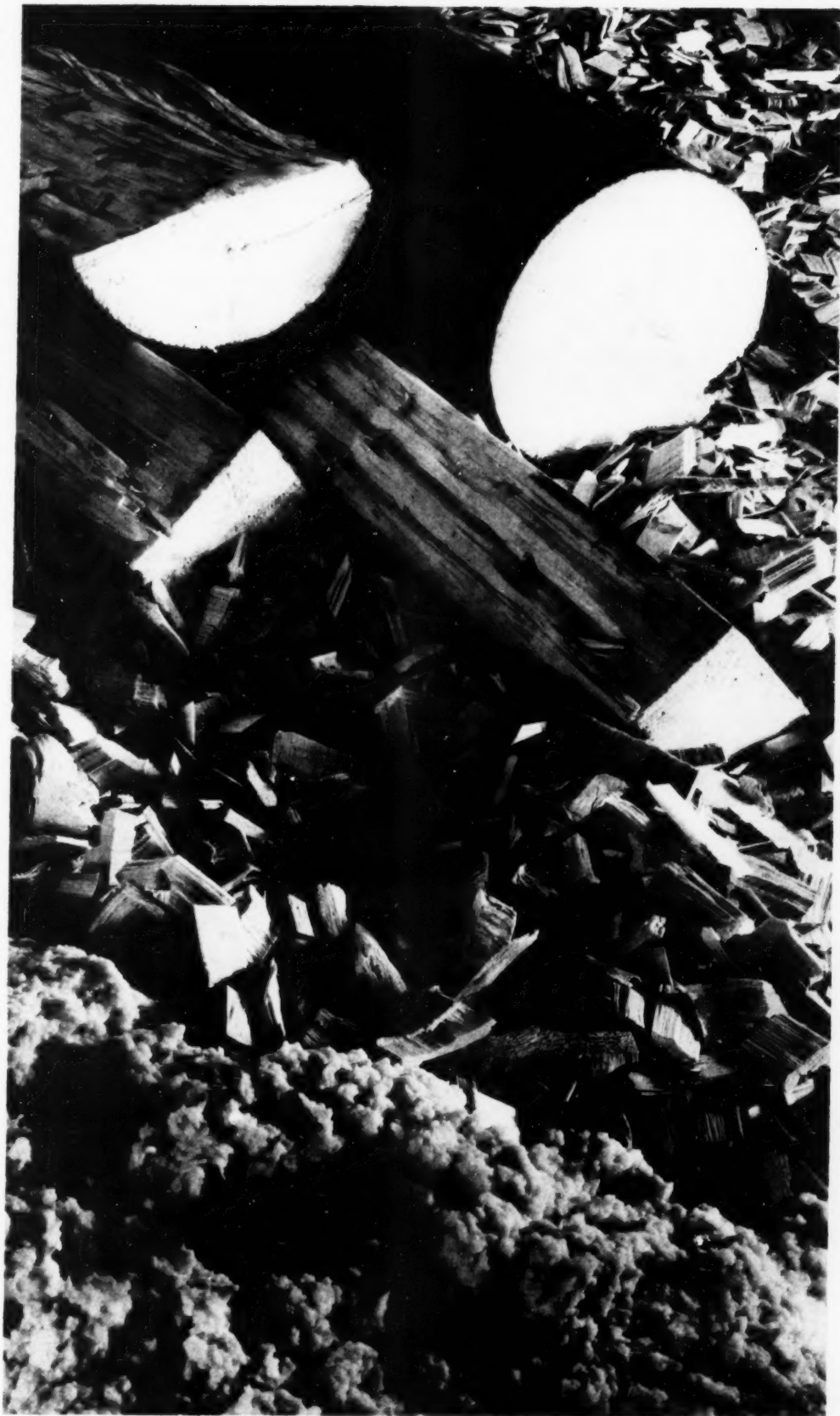


in the quality of work that is produced, and paper stock plays an important part in the finished product.

The market for photo-offset reproduction on twenty pound bond is increasing rapidly because of the economy and speed of the process. But it can only improve up to a certain point. Beyond this, in order to persuade the buyer to use more photolithography, new stocks and improved quality are essential.

The first step, as we mentioned previously, is for the lithographer to sell his larger customers the idea of filling their own combinations. The second step is to get several customers who have a fairly regular amount of work to schedule it well in advance when a heavy stock is to be used. When one such order is booked for future delivery there will be an opportunity to round up enough other jobs to fill a flat. Many photo-lithographers will wish to use their own direct mail and promotional material to fill in the gaps.

When this begins to work and heavy stock runs are being made with some regularity, it will be possible to advertise the new combination with an extended delivery date. At first this may not pay well, but consistent advertising and conscientious promotion of the plan by the salesmen will eventually make it a success. A variety of stocks available for combination runs will unquestionably increase the volume of business produced by photolithography.



*Photo Courtesy Oxford Paper Co.*

FROM LOG—TO CHIP—TO PULP—AS SEEN BY MARGARET BOURKE-WHITE

## GOOD ROLLERS PLAY AN IMPORTANT PART IN PRODUCTION

THE new lithographer has been thoroughly impressed with the importance of the roller factor in the lithographic process. His studies teach him that there are plenty of troubles to be avoided, but leave him somewhat confused as to the differences between the various kinds of rollers available and their printing characteristics. Perhaps in this article we can clear up some of the confusion. Knowing what each kind of roller should do, the lithographer will be better able to judge performance when he is experimenting to find the type which seems best suited to his needs.

In the beginning we might say that there is no such thing as a perfect roller. A perfect roller would be like a gear on a piece of machinery: made to last until the material wears out. But a roller isn't like a piece of steel. It is a temperamental thing which must be treated tenderly. The letterpress roller is, by comparison, a very simple affair. Its action is merely to relay ink to the form. But the lithographic roller has water as well as ink to contend with and therein lie the seeds for trouble. The lithographic roller must not only be resistant to the oily vehicles in the ink, but also to water and the acid carried in the water of the fountain etch. The problem is to find a suitable material which will not soften, swell or otherwise deteriorate in the presence of water, oil, acid, solvents, driers, etc. and which will not be affected by changes in temperature.

The affinity to ink of the rollers must strike a delicate balance. The inks must pass through a succession of increased affinities. In the first place the rollers must have just enough affinity for ink to carry the correct amount to the plate surface. The plate surface is treated to have a greater affinity for ink than the rollers. Otherwise there would be a pull back of ink. Then the blanket must have a greater affinity than the plate from which it receives the ink, and the paper, in turn, must have a greater affinity than any of the preceding agents.

Before some of our more improved rollers were introduced, all lithographic rollers were leather covered. Their use at the present time is very limited. Leather rollers in good condition will equal the results of any other type, but are extremely difficult to clean and have a tendency to become hard and distorted with age. Furthermore they require a steel core of large diameter which makes them very hard and they must be heavy in order to insure an even touch.

Modern rollers do not rely on their weight. Their consistency is much softer, permitting a fine touch. They can be built on a smaller diameter with a light tubular core.

As an illustration of this point let's take a  $54\frac{1}{2}$ " long core which should be finished to  $3\frac{1}{2}$ " in diameter. With

leather the core is made of solid steel  $3\frac{1}{8}$ " in diameter weighing 117 pounds. The same roller with a  $2\frac{3}{4}$ " tubular core with  $9/32$ " wall thickness weighs only 33 pounds. The core is smaller in diameter because the covering materials in use today can be considerably thicker than leather. Furthermore the specific gravity of steel is over 7 in contrast to a specific gravity of 0.9 to 1.2 of the covering materials. This means not only a saving in power, but a smoother run of this press at high or low speed.

Rubber in its pure state is too readily affected by oil, water and climatic conditions to be of use in a lithographic roller. Rubber rollers in use today are vulcanized rubber with actually a very low gum content. In the last few years organic research chemists have developed several forms of synthetic rubber some of which possess a distinct oil resistancy and are comparable in other physical properties to rubber. These must be compounded similarly to rubber in order to provide a pliable roller. Synthetic rubber may be compounded either with or without the incorporation of a percentage of natural rubber. Another type of roller in wide use is the vulcanized oil roller which is made of a mixture of linseed and other vegetable oils which are vulcanized into a non-porous solid particularly suited for the distribution of ink.

Rather than to attempt to evaluate the advantages and disadvantages of the different kinds of rollers, let us quote the words of several important roller manufacturers.

One manufacturer says: "The vulcanized oil rubber has a natural, but not too great, affinity for ink and a natural repulsion for water due to the nature of its composition. It is adaptable for high speeds in that it is ground true during manufacture and is physically unaffected by climatic or temperature changes. It is easily cleaned and does not become hard or distorted with age.

"Of recent years there has been considerable research and experimentation with rubber and synthetic rubber rollers for the lithographic process, and lithographers have found some application where rollers of this type are preferred, due to their ruggedness. However, except in such instances where a stronger and more durable material is necessary, these materials are to be questioned for the reason that they do not always print as well as the other types, and very often cause an instability of water balance."

Another large manufacturer gives us the other side of the story in these words: "The vulcanized oil roller has been used with a high degree of success for many years, but it possesses many inherent weaknesses which have not contributed particularly to roller economies. Any roller which checks or cracks naturally affects the quality of the

printing, but more particularly it shortens the life of the roller and is responsible for more frequent replacements.

"More recently so-called synthetic rollers have appeared on the market and they seem to possess many desirable qualities. First of all, through modification in the compound it is possible to produce rollers of varying body consistencies. These rollers are especially adaptable to carry the ink, and do so in a wholly satisfactory and uniform manner. They maintain a uniform diameter since they are not readily affected by oxidizing agents or climatic conditions.

"It is not the writer's opinion that the ultimate has been reached in this direction, but so far this type of roller seems to be a decided improvement over any types which have been developed heretofore."

Still another manufacturer has the following to say: "Most of the rubber rollers marketed at present do not swell and do not become sticky. They also do not develop low spots. This is mainly due to the fact that the pure gum content of these compounds is very low and its main function is to act as a binder for the numerous compounding materials used in their manufacture. The late development of the so-called ultra accelerators and antioxidants played an important role in this respect. They permit the production of soft, oil-resistant rubber compounds which will stay pliable for many years and will not be attacked by the ink vehicle, the driers or by different roller washes.

"There is no question that these rollers are more economical than vulcanized oil rollers. They last longer because of their resistance to abuse and at the same time they do not lower the printing quality."

The same manufacturer also says, "The latest developments in offset rollers are those which are made up of some synthetic organic material in combination with natural organic and inorganic compounds, without the incorporation of any natural rubber."

What can we gather from these eminently fair but conflicting statements? The answer is that there is no perfect roller as yet. That each type has its advantages and its disadvantages. But it is obvious that the large manufacturers are honest enough to recognize that certain disadvantages exist in their respective products and are constantly working on new developments to improve their rollers.

To demonstrate the problem that the roller manufacturer is up against we will list the specifications of a theoretical perfect offset roller:

#### 1. *Hardness*

Rollers should possess the proper hardness . . . not too soft and not too hard. They must have a certain amount of pliability. It is important that the hardness of the roller should not change with age, and it should keep its original hardness. In the same respect, it should not become too soft and mushy. Too resilient a roller would

bounce at every revolution as it hit the opening in the plate cylinder.

#### 2. *Evenness*

Modern offset rollers are ground in precision machinery to the exact diameters required. Being finished on these machines, their diameter is even throughout the surface of the roller, and this makes the proper setting of the roller very easy. The diameter should remain constant during the life of the roller.

#### 3. *Strength*

The rollers should be strong enough to resist handling and continuous long runs on the press. They should not crack, chip, or break out at the ends. Strength is especially important in the new modern high-speed presses, and presses taking large sheets.

#### 4. *Resistance to abrasion*

It is very important that the material used on the rollers should be tough enough to resist abrasion during the washing (especially hand washing). If it is not strong enough, fine particles are abraded, which will ultimately become transferred on the plate and leave small un-inked circles on the blanket and finished sheet.

#### 5. *Tackiness or suction*

Offset rollers should have a certain amount of tackiness or suction. If they have no suction, they will not carry the proper amount of ink. If they are too tacky, they may not release and deposit the proper amount of ink on the plate.

#### 6. *Oil-Resistance*

It is important that the oily vehicle of inks should not affect the surface of the rollers. The rollers should not swell, become tacky or sticky. If they swell, they may lose their perfect shape and it is almost impossible to set the rollers then so that they touch the plate or ink-drum evenly.

#### 7. *Resistance to color-absorption*

It is important that the ink vehicle and the toners should not penetrate into the rollers. If this penetration takes place, generally it is very hard to wash the colors out. It takes a long time and it may cause difficulty, if a light tint is to be printed after a heavy and dark color.

#### 8. *Resistance to oxidation*

This is a very important factor. Inks contain various amounts of driers which have the property to accelerate oxidation. If this takes place, the surface of the roller will become shiny, glossy, and will not carry the proper amount of ink.

#### 9. *Resistance to water*

Offset rollers should not be affected by water or chemicals used in the dampening solution. It is also important that they should not absorb water, because this would make proper inking impossible.

(Continued on page 123)



# ORIGINAL COPY VERSUS QUALITY

by WM. A. MARKERT

Kopy Komposers, Bourse Building, Philadelphia

**I**N the previous article it was stated that criticism was being directed at the photo-lithographic industry because of its "only fair" or "not any too good" results and the fact that a better quality of original copy would make for a higher quality of reproduction in the completed job.

Just what can be done by the photo-lithographer to correct his position in the eyes of the experienced or well informed buyers of printing, from whose offices originate the bigger and more profitable sales?

Let it be reiterated that it revolves itself around the spoken or written word to the practical education of buyers and prospects of photo-lithography, which must be initiated by the "boss," the manager, the proprietor, and the sales representatives.

Since the quality of the original copy plays such an important part, the very least that should be done is to teach customers what constitutes the proper kind of copy, what he can use to make up his original copy, what he should avoid doing in order to eliminate possible poorly reproduced results, how he can help his photo-lithographer to get desired results, as well as secure his job at a minimum of expense.

## TYPESET COPY OR PROOFS

It is quite an easy matter to "farm out" typesetting to some cheap composition house, or to the composing department of a small letterpress shop. It is quite another matter, in many instances, to be able to secure high quality reproduction results. Letterpress departments do not seem to be able to appreciate that extreme care is necessary in pulling proofs, probably because the average proofs pulled are for proof-reading purposes. The characters are not always solid, the proof paper may be highly glossed or of waxy-like finish, which does not readily absorb the ink and thus results in open spots. The ink used may have a grayish or bluish tinge instead of being an intense black.

On the other hand certain composition houses specializing on typesetting and repro-proofs may not always lock up the type in a chase but bind the metal with string and then pull hand proofs. The result is sometimes that there is a bulge in the upper and lower sections of the copy, and often the right hand or left hand margins are not in true alignment. The pertinent question is "how can a layout man, in the shop, strip up his copy in quality form or the person in the office possibly paste up such copy with any

degree of alignment and neatness?" It is just such small things that give quality shops an opportunity to criticize and make them real competitors.

### *broken type proof*

**This is a specimen of typesetting as will often appear on proofs and will result in a reproduction such as this.**

### *center bulged*

child of the employer, or "Wages" includes every f  
(wife—or husband) of the an employee from his emp  
to partnerships or corpora— sions, bonuses and the reaso

### *slurred proof*

**This is a specimen of typesetting as will often appear on proofs and will result in a reproduction such as this,**

### *heavy offset impression*

**the albumen in a bag of cheesecloth, hang the bag just beneath the surface of the water. In a relatively short**

### *uneven impression*

## MECHANICAL OR HYDR

### *too light an impression*

The greater part of very issue will be given over increase sales, efficiency and quality. Where can yo

### A Comparison of Reproduction Proofs

Some of the very finest results in getting clean cut sharp edged reproductions of typeset copy is to request proofs on a special dull coated enamel stock as used by the better typesetting houses.

If the matter of bulges in type set-up in not corrected insist on the type being locked up in forms, or change the source for better repro-proofs. If the characters are not solidly black insist on more careful lockups. Why should it be necessary for the lithographer to stand the cost of retouching the negatives or plates?

Insist on intense black inks and refuse gray black or watery black impressions. There is no use in trying to put one over on the camera. Remember that ragged or slurred edges are exaggerated in photo-lithography, as well as any other defects, and if your layout and plate departments need to do unnecessary corrective work (for which you are not getting paid) you are simply adding to the labor cost of doing the job, and reducing the profit.



If your men are imbued with the "that'll do" or "good enough" itch, you will inevitably be called upon to do more scratching for the lesser quality and more competitive jobs. The more good new accounts you develop the greater will be the efforts on the part of your competitors to get those accounts away from you. They seem to take keen delight in showing up your lack of quality against their own "better quality." Again what customers and prospects do not know or appreciate is the fact that the *copy was partly or wholly to blame*. **INSIST ON QUALITY IN THE KIND OF REPRO-PROOFS YOU BUY OUTSIDE, OR ACQUIRE FROM YOUR CUSTOMER.** You help yourself by helping customers to furnish good repro-proofs.

Many printing buyers and users select type for their beauty of design. They do not welcome their selection coming out with a scab, a rash, or small pox. Cater to these so-called fussy, or particular buyers, for they dislike to periodically train new offset printers and they will stand by you because of your interest. As to the selection of type, with which subject you may not be too familiar, if this important step is left to your judgment, be guided by your typesetting house provided it ranks high with the trade. The customer who gets words of praise from his printed job, the style and make up of copy, etc. praises you in turn for your cooperation. He sends forth praises in the shape of more orders.

#### TYPEWRITTEN COPY

Much more carelessness and indifference has been shown in the matter of handling typewritten copy. There seems to be a tendency to accept the copy on the principle that "it's not our business to tell customers what they should do" or "they certainly ought to know how their copy will come out with such typewriting," or "they certainly do not expect the camera to change and refine such copy."

The fact is that many customers know nothing about the process and because of their ignorance believe they will get fairly good readable printing only to experience disappointment with the final job. An indifferent attitude on this important subject of right copy preparation on the part of the user, or the photo-lithographer simply helps to add to the already large criticism of only fair, or poor quality of printing, and reflects on the work of the offset printer. Does the customer know exactly what takes place in the handling of his job? Does he even know the simple fact that a camera is involved? Does he fully realize that clogged-up type and a heavily inked ribbon will be exaggerated under the camera and if reduced, letters like the "a", "e", "m", "w", "s", and "c" will close up completely giving a very spotty appearance. The fact is that many customers do not know what takes place in the offset printing process and there have been many instances where the larger buyers have been astounded and have learned much by being shown through a plant.

SEPTEMBER 1937

Here are a few outstanding defects in typewritten copy:

1. Poor and uneven alignment.
2. Broken or much used type faces.
3. The use of worn or improper ribbons.

For instance it is known that blue will not register before the camera. The use of blue-black ribbons causes irregularities. Red-black or bronze-black ribbons are best. Ribbons are now specially made for reproduction purposes.

4. Clogged type due to improper cleaning of typewriter keys.
5. Copy written on colored or tinted paper.
6. Poor scaling of copy—too great a reduction etc.

#### *reduction too fine*

Frances Rice, Evelyn Robertson, Behise Sadik, Shirley Sanford, Irene Sartor, Marion Schultz, Gertrude Schultz, Elizabeth Sherk, Mary Shuford, Violet Sims, Marion Siemons, Elizabeth Smallman, Georgiana Smith, Margaret Smith, Helen Smithson, Marie Soucase, Margaret Souter, Helen Southon, Maude Southon, Mary Stalker, Marjorie Stebbins, Elizabeth Stockdale, Jean Stone, Barbara Strand,

#### *poor readability*

7. Some items of the curriculum appear to be extensively done: statistical analysis of test results, general accomplishments realized and neglected aims, the study of time allotment, and diagrams, and recommendations.

#### *ribbon too light*

The moral knowledge and ethical discrimination pupils in the direct instruction experiment on the grade level, as measured by the Kohs test, showed a difference in favor of the experimental groups both in which the experiment was run. When compared with results of related experiments an advantage seems to be found in favor of direct instruction.

#### *keys not uniformly clean*

each investment. It is never an agreed price contractual payment. It is the residual after actual contractual dues have been paid, and the stated value of the opportunity costs such as t

#### *out of alignment*

THE NEW DIAGNOSTIC TESTS AND PRACTICE  
grades three, four, five, six, seven,

#### *bad job of correction*

consequence of sedentary habits of living  
happens nine-tenths of our ailments have the  
cause in poor circulation, poor digestion

#### QUALITY TYPEWRITING

A composing or standard typewriter properly serviced, with the best kind of reproduction ribbon and efficiently operated, will uniformly show good quality results.

A Comparison of Typewritten Copy

Because the typewriter is so commonly used is no reason for "common" work, especially where the copy is prepared for reproduction purposes. Many price lists, directories, bulletins, catalogues, etc., lose their interest because poorly prepared material was used as original copy. There are certain definite laws underlying advertising and selling psychology, which will always affect the attention-getting, the interest in, the desire for and the final action of buying. In a former school of salesmanship there was a formula called Q Q M. Translated it meant that QUALITY, QUANTITY and MODE OF CONDUCT governed every transaction. Photo-lithography offset printing is no exception to this formula. The house which makes it their business to persuade and encourage buyers of offset printing to prepare better quality copy will benefit by such education.

What good is there in using a special finish offset paper stock, and retouching photographs, entailing a good deal of expense, and then having the typewritten text or explanation captions made up in mediocre form? If quality is essential in paper stock and in the halftone reproductions, it is certainly most essential that the eye be not offended by poor or sloppy reading material, or the whole pasted up in poor design. Yet this is not an exaggerated example as can be attested to by looking over samples of lithographic work. The fact is that a golden opportunity is being overlooked in not tying the customer close to you ON THE BASIS OF A QUALITY SHOP. It cannot be over emphasized that sooner or later users will migrate to those shops that turn out a better class of offset printing, or go back to letter press, until convinced otherwise.

The salesman, or representative of the firm needs to use but a few words of reason, suggestion, and persuasion, to get the customer to retype his material or accept the lithographer's service at nominal additional cost. The fact really is that customers usually appreciate this service. No customer can possibly put up a sound defense against paying a small nominal sum for better typing when he has already spent many dollars for retouching the photographs.

More particularly are you in a sound position where the material is intended for outside distribution, and is a direct appeal for sales. Do poorly made up packages, or poorly dressed window displays attract sales for the product? Why then put up with mediocre typewriting? Why not help the smaller user in building up his business by the use of a higher quality of typed or typeset composition. Isn't "the wagging tongue of a satisfied user" the unseen force that makes for bigger and healthier printing plants? SATISFACTION AND PERMANENCY IS BASED ON QUALITY OF PRODUCT AND QUALITY OF SERVICE, WHETHER IT IS OFFSET PRINTING OR WHETHER IT IS LETTER-PRESS PRINTING.

In the next article the subject of layout and paste-up of copy will be somewhat in detail.

## TECHNICAL DEPARTMENT

By DR. L. R. MELOY

### Questions and Answers

QUESTION: *I am desirous of having some photo-offset printing done. This is to include many photographs. I have a contact printer and a projection printer. The cost of having the photographs screened adds over 100% to my printing. Can you advise me whether I may purchase and interpose a screen between negative and paper for contact work or against the negative or on the paper in reduction projection printing?*

ANSWER: I have your letter of the 12th regarding screening negatives. My advice to you would be to get in touch with a photo-lithographer. It would be very foolish for you to try to make your prints through a screen. There are, of course, several of these on the market, but they are very expensive, and you can appreciate that if the photo-lithographer in a lithographic shop has to spend several years learning how to get sharp, clean reproductions with a screen, you would have a great deal of difficulty getting any worthwhile results.

QUESTION: *We are taking the liberty of attaching a sheet of typewritten copy from carbon ribbon to be used for reproduction for photo-offset. This has been typed on a new typewriter. We have done several pages and note that there is a faint blur around the letters. Would you please advise the reason for this or if there is any way that same may be overcome?*

ANSWER: The trouble which you have experienced on typewritten copy made from carbon ribbon has been checked with various manufacturers here, and I find that the trouble is due to the type of ribbon which you have purchased. It has a soft surface and the fibres or hairs of the silk composing the base of the ribbon are loose and print as the type bar is struck. The only remedy I can suggest is that you get a hard carbon ribbon which is guaranteed to print clean and clear, and I am quite sure that your trouble will be eliminated, because the type face appears to be clean and sharp.

QUESTION: *Is it practical or possible to print Aniline Dye Inks by regular offset—using regular offset equipment? If so, do you know who makes ink or rather who has had experience in making inks for this purpose? Also, is it necessary to change the fountain water solution or method of finishing plates?*

ANSWER: It is possible to use aniline dye inks on a regular lithographic press, but it is not at all easy. Because the dyes are soluble in water it is necessary to disconnect the water fountain and run the plates dry. This entails the use of high-etch plates.

THE PHOTO-LITHOGRAPHER

PRODUCED BY OFFSET FROM ALBUMEN PRESS PLATES



This chair was produced by photolithography using a Monsen Drop-out Film Negative. The background was dropped-out mechanically, requiring no hand opaquing. Examine the upholstery under a magnifying glass and note that the dots were dropped-out of the white design. We can drop out anything that has the value of white paper. The price of this drop-out negative **\$300** ready to print down

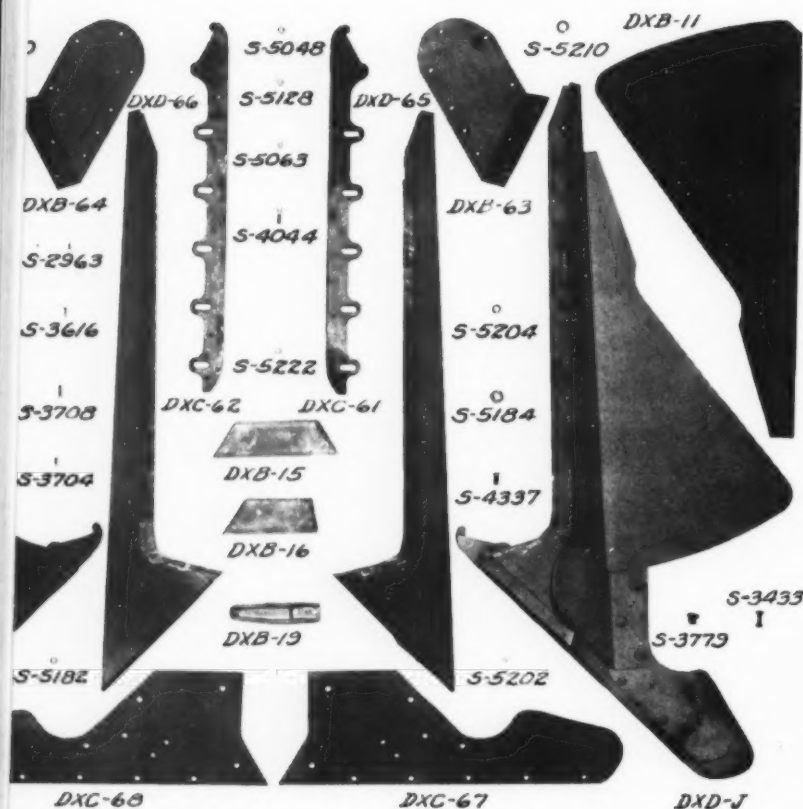
## MONSEN DROP-OUT FILM NEGATIVES\*

Are automatically highlighted and outlined and have sharp, hard dots which give deep-etch effects from albumen press plates. Compare our prices on the following pages with your cost for producing comparable quality by whatever method you are using. We are confident Monsen Drop-out Film Negatives will show a big saving. Please note that some of these subjects are the hardest to reproduce by the offset process, regardless of the cost, yet our prices are remarkably low. This should open a new market for you.

**THORMOD MONSEN & SON, INC.**  
730 NORTH FRANKLIN STREET - CHICAGO, ILLINOIS

*\*We make the Film Negatives from your copy by a special process, but do not sell the raw material.*



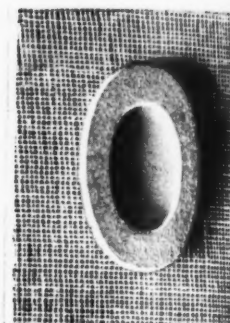


COURTESY MAGILL WEINSHEIMER

This is a small portion of a parts list negative. In this job the illustration and parts numbers were shot at the same time, requiring no opaquing or outlining. Price of this negative is **\$300**



COURTESY THE SCHOLL MFG. CO., INC.



These six copies were grouped by customer and made in one shot and charged as one negative. Note the manner in which delicate modeling and sharp lines are reproduced. No outlying—no re-touching required. Price of this negative **\$300**



This type of copy is very difficult to reproduce by albumen offset and do justice to the original. By Monsen's mechanical Drop-out method, it is possible to produce results which could not be obtained by regular processes. Price of this negative

**\$300**

### PRICE LIST

#### Drop-out Halftone Negatives

(Background and highlights to be dropped out must have the value of white paper)

5½ x 8½ or smaller.....	\$3.00
8½ x 11.....	4.50
10 x 13.....	6.00
13 x 16.....	8.00

20% EXTRA FOR STRIP-FILM

#### Regular Halftone Negatives

8½ x 11 or smaller.....	\$3.00
10 x 13.....	4.00
13 x 16.....	5.00
18 x 22.....	8.00

20% EXTRA FOR STRIP-FILM

Where customer is desirous of assembling illustrations to make one shot the customer must do the grouping.



PRODUCED BY OFFSET FROM ALBUMEN PRESS PLATES



COURTESY  
NEWMAN-RUDOLPH  
CHICAGO

Here is a class of copy representative of a large field for offset. Now, with Monsen Drop-out film halftones, you can give deep-etch effects from albumen plates at a fraction of the cost. No opaquing or retouching is necessary. Price of this complete negative

**\$4<sup>50</sup>**

M O N S E N - C H I C A G O

# MONSEN COMPLETE SERVICE

*For the Lithographer, Photo-lithographer, Offset Printer, Advertising Agency, Photo-engraver, Letterpress Printer and Private Plant.*

Over a period of fifty years we have built up a complete service for letterpress printing and offset lithography. We can handle your peak loads economically or give you service that will pay you to eliminate certain departments where it is impossible to maintain a steady flow of work. We are strictly a service house and operate no printing or lithograph presses.

## FOR OFFSET LITHOGRAPHY

### The Ten Different Mosen Impressions

1. Reverse Type Transfer
2. Straight Transfer Impressions
3. Black on White Impressions
4. Transparent Positives
5. White Type Impressions (Read Right)
6. Reverse White Type Impressions
7. Impressions of Electros, Halftones or Zinc etchings
8. Strip Film Negatives (Strip with water)
9. Film Negatives
10. Zinc plate Originals

### Lithographic Plate Making

*Line and Half-tone Negatives and Positives on film, quality surpassing that of wet plate.*

*Drop-out Film Negatives.* We can drop-out all background and highlights that have the value of white paper. Outlining eliminated and negatives of better printing-down quality.

*Photo-lith Originals* furnished for hand transferring.

*Albumen Press Plates.* All our albumen press plates are Colloid desensitized requiring the very minimum of fountain etch or dampening. With these plates you can carry full color, approaching deep-etch results.

*Deep Etch Press Plates.* Our experience enables us to furnish quickly deep-etch press plates that are dependable and economical.

## FOR LETTERPRESS PRINTING

### Advertising Typography

One of the largest collection of type faces used appropriately by our skilled craftsmen, offer to the advertising agency, the finest Advertising Typography.

### Trade Composition

Our machine department both monotype and linotype, operate both day and night making available to our clientele the best service.

### Our Machine Department

We can machine set type from 4 to 24 point along with Hand composition and complete letterpress makeup of all description.

### Electrotyping

Electrotypes and nickeltypes can be furnished from any of our type faces and may be had mounted on wood or prepared for patent base.

### Typefounding

We manufacture hard copper mixed foundry metal type and sell in job and weight fonts or sorts. Any of this type may be had day or night.

## THORMOD MONSEN & SON, INC.

Established 1887—fifty years experience in producing quality with service by the most advanced methods.

730 N. FRANKLIN STREET

CHICAGO, ILLINOIS

# KODALITH STRIPPING FILM

*gives wet-plate results  
without the  
fuss and bother*



**T**AKE Kodalith Transparent Stripping Film just as it comes from the package . . . smooth it onto a stay-flat holder . . . place it in the camera . . . make the exposure. It's as quick as that . . . and as clean. No glass-scrubbing . . . no other fuss or bother. For finishing, two minutes in the developer, three to "fix" . . . and you've got your negative. In the meantime you've started another.

And take the word of more than 300 photoengravers for it . . . Kodalith Transparent Stripping Film will do any black-and-white job just as well as wet plate.

In a word, while just as efficient, Kodalith is faster . . . more economical . . . far cleaner to use. Negative production steps way up . . . sink work drops way down . . . and material costs hit a new low.

That's why, for high-grade, high-speed line or halftone negatives, the growing choice is Kodalith Transparent Stripping Film. Write for a demonstration appointment.

**EASTMAN KODAK CO.** Graphic Arts Dept.  
Rochester, N. Y.



# THE FIRING SQUAD IN ADVERTISING

by JOHN A. ULLMAN

**"ATTENTION! Ready! Aim!—FIRE!!"**

Mr. John Q. Red Ink, of the Red Inks of Depression Island, fell dead. He had been tried by a solemn courtmartial composed of the business manager, the advertising manager and the sales manager, supported by a host of junior officers.

Those four commands are as truly the backbone of an intelligent advertising campaign as they are of the awesome firing squad. Obeyed by a corps of trained marksmen in the advertising department, the Red Inks of this world have no more chance than the traitors of history.

"Attention!" translated into business terminology is usually expressed by the phrase, "Say, folks, the P. J. Hopskip Company is stealing our business. Let's take a check up and see what we need." A meeting is held and an advertising campaign is decided upon.

"Ready!" Reduce that to its commercial significance and it generally means a study of the company's product, of its equipment, of its potential market, of its previous advertising, and of its intended scope.

"Aim!" That means that the market has been selected, that the form of advertising to reach that market has been agreed upon, that the campaign has been set up, and that the sales force is ready to go out and mop up on its heels.

"FIRE!" The advertising is released. It comes out, not in the "fire-at-will" method of the early English archers, but in the salvo method, a round, another, and another, until the opposition is ready to surrender.

Advertising worthy of the name is laid out and executed in just about that way. In fact, there are eight recognized steps in the preparation of an advertising assault. They are:

1—A meeting, generally attended by the copy writer, art director, layout man, under either the account executive or the advertising manager. They study, first, the previous advertising to gather the known and publicized facts about the product. Then they talk over the coming campaign, and suggest any ideas that occur to them.

2—The copy writer and the layout man rough out their respective parts of an advertisement. Sometimes they work individually and fit their roughs together afterward. Better ads result, as a rule, from a close cooperation between the lyricist and the musician, however.

3—Another meeting is called, with the same four members, and the rough layouts are studied, criticized, amplified or simplified. Then a selection of the theme of the campaign and the style of the advertisements is made.

4—Armed now with a definite program, the layouts are made again, and submitted either to the client or to the

boss (if the campaign is being made for the ad-men's own company).

5—The sketches approved, the finished drawing is made and the type to be used is cared for as specified.

6—Generally a photostat is made of the finished drawing, and is pasted into the layout; a typesetting is taken, and the whole is re-submitted.

7—The finished work, again approved, is scaled and marked for size and sent to the engraver, who submits progressive proof on the paper used by the publication in which it will appear, and made of the inks that publication uses.

8—The engraver's proof and the type proof together form the final assembled proof.

Thus, from the birth of the idea of advertising at all to the finished advertisement, the steps are taken in a pre-arranged manner, so that the most effective advertisement is constructed. The old slap-dash way of going after an advertising campaign is as dead as the dodo bird.

For advertising is an art, a definite and concrete procedure that has been charted and plotted as thoroughly as shipping lanes between Boston and New York. It is now universally known and understood that an advertisement must attract attention, be clear and understandable, reflect the character of the product advertised and get a specific and tangible result.

Attention today is generally attracted to an advertisement by the artist. He can get it by the arrangement of the layout; by a contrast either in the size or shape of the words or in the smart use of color or white space; by a change of pace, which is nothing more nor less than giving a new twist to an old familiar phrase or thought, or simply by showing, in a picture, something cute, startling or beautiful.

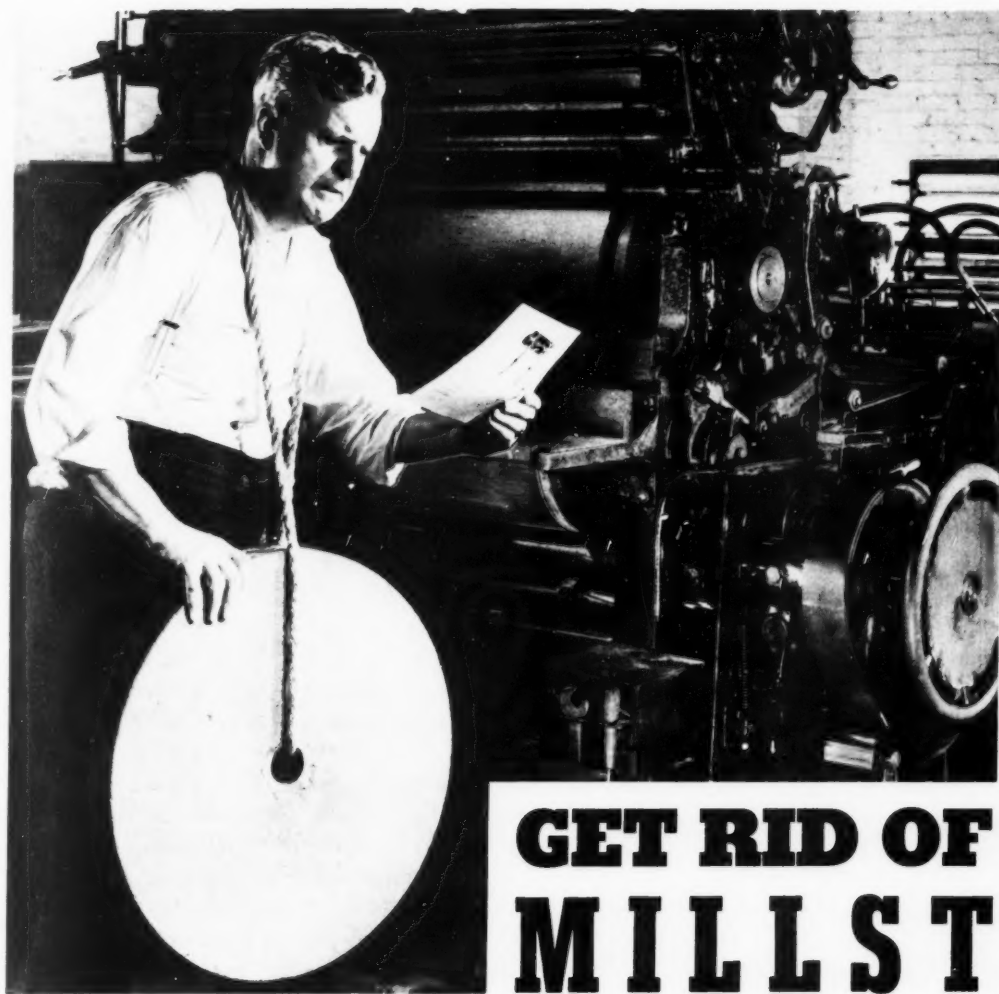
Clarity, which means that the reader understands exactly what the ad is intended to convey, can be obtained by layout, too. An advertisement that draws the reader's eye from the heading to the coupon or the firm's name and address, through the arguments of the copy in just the manner that the selling talk is meant to be read will have that clarity.

The character of the product can be pretty well reflected by the type, by the illustration, by the arrangement of the wording and illustration, or by the selection of the medium.

Results, which means in most cases that the reader lays aside the ad, and rushes to the advertiser with his money clutched in his hand, either figuratively or literally, can be obtained only by a proper correlation of the head-

*(Continued on page 122)*





## GET RID OF THE MILLSTONE!

People sometimes tie millstones around their own necks — and then wonder what holds them back!

Millstones don't, of course, *look* anything like rollers, but the wrong offset rollers *act* mighty like millstones hanging around a printer's neck. They keep him from turning out offset jobs of quality. And they keep him from turning out even this mediocre work in the time he should in order to beat present-day competition.

It might pay these printers to look into Litho-Print Rollers. True, they're new, and they look and feel "different." But they've been proven practical and economical — valuable aids in the production of finest lithography — at a profit.

There's no sense in keeping outmoded rollers on your presses when it doesn't cost any more to have the best. Why make it hard for yourself? Why try to run your business — turn out good work — with a millstone around your neck?



## SAM'L BINGHAM'S SON MFG. CO.

ATLANTA  
CHICAGO  
CLEVELAND  
NASHVILLE

DES MOINES  
DETROIT  
DALLAS  
HOUSTON

INDIANAPOLIS  
KALAMAZOO  
KANSAS CITY  
ST. LOUIS

MINNEAPOLIS  
PITTSBURGH  
SPRINGFIELD, O.  
OKLAHOMA CITY

PACIFIC COAST REPRESENTATIVES:

CALIFORNIA INK COMPANY, INC., San Francisco, Los Angeles, Portland, Seattle, Salt Lake City

SEPTEMBER 1937

## INK PROBLEMS OF THE LITHOGRAPHER

THE one thing by which many a customer judges a finished job is the ink. Regardless of whether the process used is letter-press or lithography, ink is a *sine qua non*. However, when the letterpress printer can often get by with a poor quality ink by running a heavy coverage or a deeper impression, the lithographer can use no such expedients. His ink must be good or the fault will be obvious. Any amateur can tell when the black is dull or greyish, when too little ink has been used or when the image has filled up. Ink manufacturers today are making real blacks; dense blacks which provide maximum contrast and sharp impressions.

Naturally, good results cannot be expected from a substandard ink. Cheap ink is insufficiently dense and will produce a faded impression. Too heavy a flow of ink, used to overcome this will cause offset. Incidentally, there is no economy in using an inexpensive ink to save money, and then running a heavier flow in an attempt to get the desired result. The additional quantity of ink used will generally more than use up the amount of money saved by too close buying.

If a photo-lithographer deals with an irresponsible supplier, he may expect to receive an ink which is poorly ground. Such an ink will not print sharply and will eventually wear away the fine parts of the plate. Even when the best ink is used, the photo-lithographer will occasionally run into troubles, but when an inferior ink is used, trouble may be expected from the start.

Many factors govern the production of a properly inked job. When a customer complains about color or life, the fault need not be attributed to the ink itself. The kind of paper used, the condition of the rollers, the adjustment of the blanket, the adjustment of the ink fountain, the ability of the pressman and a number of other factors all play their part in the final result. If a good ink is used and is not doctored by the pressman, it will be simpler to trace an ink complaint to its actual cause.

One of the greatest single causes of ink troubles is amateur doctoring. When the novice pressman finds that the ink is bleeding or filling or tinting up he adds his pet formula which is guaranteed to remedy the situation. The worst of these formulae which find their way into so many shops is that they actually do cure the trouble. But the cure is only temporary. Later other troubles will crop up which were actually caused by the doctoring of the ink. The inexperienced pressman, however, will never blame his pet formula in which he has the blind faith a hypochondriac has in the latest patent medicine. Instead he will blame the plates or the ink itself without getting at the bottom of the trouble.

A good shop rule which will forestall many ink complaints is that no pressman be allowed to add anything to the ink except one of the accepted products sold by the

manufacturer of the ink he is using. It is obvious that the manufacturer of inks, employing experienced chemists to perfect his product, knows what should go in it. In practically every case, ink can be made right solely by the addition of the proper grade of lithographic varnish or an accepted drier. Only in rare instances is anything else needed. In no instance should quack remedies compounded by the pressman or bought from an unreliable manufacturer be allowed in the shop.

Another cause of many troubles is the use of kerosene as a reducing agent in the vain belief that it is economical. Kerosene should never be used in a litho plant. Nothing will ruin a roller more quickly. If the lithographer who uses kerosene will balance the saving against the cost of ruined rollers and lost time, he will soon see that kerosene is costing him more than varnish.

Let it be said to their credit that ink manufacturers are continually working to perfect their products, but new and varied problems constantly arise. The photo-lithographer should not expect that any single ink can be used on all paper stocks. A special paper often requires the devising of a new formula by the ink manufacturer.

The lithographic process demands ink radically different from the ink used in other processes. Lithographic ink is difficult to compound. Skill and long experience are needed. Resistance to water and acid are vital. Lithographic ink must not pile or cake or oxidize the plate. It must not be injurious to rollers or blankets. These and innumerable other factors make the manufacturer of lithographic inks a highly specialized field. Many a plant has wasted vast sums of money trying unsuccessfully to make its own ink.

The photo-lithographer should always buy from a reliable ink manufacturer. The established house employs chemists who are trying to solve problems before they arise in the shop. When troubles do occur the lithographer can get help.

The responsible ink manufacturer will always carry a uniform product. He will not throw the pressman off by altering his formula without notification. He will produce a product that is all ink rather than one well-loaded with filler. In short, he will help the photo-lithographer to produce better work at less expense.

A chart covering practically every trouble resulting from ink that can occur in the pressroom is published in *The Photo-Lithographer's Manual* through the courtesy of one of the good ink companies. This chart gives complete data on how to recognize and overcome practically any trouble resulting from ink that can arise in the pressroom. But even this chart recognizes the fact that the ink manufacturer must be the final authority. "When in doubt," says a footnote, "don't experiment. Consult a reliable ink manufacturer."

# BECKETT COVER



SAMPLE BOOK & COLOR SUGGESTIONS

## NEW SAMPLE BOOK

The LEADERSHIP OF BECKETT COVER in the field of lower cost cover papers is further emphasized by the enlargement of the color range and the addition of new finishes.

It is one of the easiest surfaces in the world to print and entire uniformity of the two sides adapts it perfectly to any press procedure or any type of work.

BECKETT COVER is stocked in all regular sizes and weights in antique and ripple finishes, and in eleven striking colors and white. Special finishes are speedily available.

Correct and appropriate color combinations for printing on BECKETT COVER and description of the inks suggested may be found on each page of this new Sample Book.

*Ask for your copy today by addressing*

# BULKLEY, DUNTON & CO.

295 MADISON AVE.

NEW YORK, N. Y.

Telephone CAledonia



5 - 5260 to 5268

SEPTEMBER 1937

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## DETERMINING THE CHOICE OF EQUIPMENT

THE purchase of new equipment entails the most serious decision a lithographer must make. Upon his decision may rest the very success or failure of his business. The outlay of too much money may leave him without sufficient capital to run his business properly. Delay in securing efficient equipment may prevent him from turning out quality work or from meeting competitive prices. The lithographer may be tempted to purchase equipment that costs more than he can afford or he may buy cheap equipment which will cost him more in the long run. He must measure his normal business accurately so that he will be neither over-machined or undermachined. He must decide from what manufacturer to purchase his equipment.

During the pre-depression years, many lithographers installed new presses and photographic equipment in order to fill the orders which were pouring in. The idea of turning down an order because of lack of equipment on which to produce the job was unthinkable. Came the deluge and presses lay idle gathering dust. Four presses out of six idle for months at a time was no isolated case.

Now business is growing once more and new presses are being installed in every part of the country. This is an encouraging sign, but there is need for a warning. The lithographer must be conservative or he will get into the same over-machined position he fell into ten years ago. He must purchase equipment to fill his *normal* needs, figured over a yearly period, rather than to fill his extraordinary needs caused by a sudden but possibly brief flood of work. He will make more profit running to capacity, working overtime and turning down an occasional job when rushed, than he will by accepting all jobs, buying new equipment in order to turn them out, and subsequently finding his machines idle part of the time. Equipment should only be bought to fill normal replacement needs and gradual expansion needs.

The lithographer must also decide on the type of equipment which will fill his normal needs. Will he have steady use for expensive cameras, or will they prove white elephants used only occasionally? Does he really have steady work for that very desirable two-color press or will two one-color presses prove more efficient? The practice of running one-color jobs on two-color presses is widely practiced and obviously uneconomical.

Does this warning sound too conservative? Are we suggesting that progress in the industry stop or even slow down? Far from it. Through the use of new and improved equipment lithography will be placed in sounder competitive position with other processes. But there will be failures in the industry and second-hand equipment will flood the market if another period of reckless buying begins.

We have all seen good lithographic houses run down because old-fashioned equipment was not regularly replaced by new. There is danger on that side of the fence also. A definite sum must be put aside every year for replacement. This sum, which should under no circumstances be used for other needs, will take care of replacement. This is an accepted part of overhead expense. The lithographer who diverts this sum for any purpose, however necessary it may be, is pulling down the foundations of his business. Additional equipment, beyond regular replacement, should be purchased out of a part of the earned surplus as business grows.

What type of equipment should be purchased? This is a difficult question for anyone to answer. For the photolithographer just going into business it is particularly hard.

The first and most obvious point is quality. Will the equipment produce the best results? Will it wear? Will it give years of uninterrupted service and have resale value when it must be exchanged for new equipment?

What is the right size to buy? The lithographer who has been in business for some time can best judge this by reviewing the work produced in the past year and determining his exact needs. The new lithographer can seek advice from an impartial consultant or a friend who is established in the industry.

Simplicity of operation is to be carefully considered. Equipment which is difficult to operate requires more highly skilled operators increasing the hourly rate and possibly slowing up production.

The reputation of the manufacturer for service is an important factor. A press which stands idle for days at a time waiting for parts or repairs will upset the whole schedule of a shop. The better equipment manufacturers are interested not only in installing a piece of machinery, but in keeping it in working order. The established firm gives service because its reputation is valuable and future business is expected. The fly-by-night outfit cares only about the initial purchase.

The question of price is naturally of paramount importance. But if a price seems high it is sensible to find out the reason. Is it high because the equipment is superior or is the manufacturer taking an excessive profit? Will the less expensive equipment cost more money over a period of years? One need not buy the most expensive equipment necessarily, but one should try to buy the best whatever the cost. More work, for instance, can be turned out on two speedy, efficient presses than on three presses which need constant adjustment and repairs.

The lithographer with little capital who buys only a small amount of equipment, but who buys the best, is in

(Continued on page 123)



**OVER  
A HALF CENTURY  
OF SERVICE**

# SIEBOLD

**ESTABLISHED  
IN 1882**

## **INKS**

Our reputation in the manufacturing of lithographic, offset and printing inks has withstood the test of the most critical user and therefore we are able to give our customers greater value and stronger color for the money today than ever before, after all impressions per pound means more than mere price. There is no problem a problem to Siebold.

*Supply Price List, Offset  
and Safety Ink Specimen  
Books upon request.*

## **SIEBOLD'S SAFETY INK**

At a comparatively small cost by printing in pantographic design or otherwise you can manufacture your own safety paper, using any type of litho offset plate including dampers as this is not a water sensitive ink.

## **PHOTO LITHO CHEMICALS**

Each item has been individually tested and found to be best suited for the PHOTO OFFSET LITHOGRAPHER.

## **SIEBOLD'S ROLLER DEPARTMENT**

Fully equipped to supply your wants such as Smooth and Grain Leather Rollers, Molleton and Muslin Covers, also full selection of Hand Rollers, both Rubber and Leather for transferer's and prover's use. These are of our own manufacture and our half century reputation is in back of every one.

# **J. H. & G. B. SIEBOLD, INC.**

*Lithographers' Supplies*

*Office:*

**47-49 WATTS STREET  
New York, N. Y.**

*Factory:*

**99-105 SIXTH AVENUE  
New York, N. Y.**

**Telephones: WAlker 5-9474-5-6**

**OFFSET BLACKS • COLORS • SAFETY INKS • ROLLERS • MOLLETON • DAMPER COVERS • RUBBER BLANKETS**

# THE SALESMAN AND THE CERBERUS

## A Dissertation on the Receptionist Problem and the Problems of Receptionists

"I WOULDN'T think of disturbing him now. He's in conference."

"But this is very important, and I'm sure Mr. Beetlebrow would—"

"I'm sorry."

A sweet young thing returns to her typing, and a harried young man gives his briefcase another hitch under his arm pit, adds another line to the collection of his brow and retreats with as much dignity as possible.

If my mythology hasn't left me entirely, this is a modern re-enactment of an old mellerdramer that first took place at the very gates of Hell. In those days Hell was a tough place to crash. Salesman after salesman tried it, only to meet with rebuff. The receptionist was a dog with three heads, called Cerberus. He was an unfriendly critter, only sleeping one head at a time, leaving the other two free to glare, growl or snap, depending on the determination of the applicant.

Orpheus got by. He sang the Cerberus to sleep, or something like that.

The receptionist, today, is a vast improvement over the freak dog at the portals of Avernus. She's usually good looking; she has a well-modulated voice; she appears to know everything that's going on "inside"; she remembers names. But she's just as hard to pass as anything the ancient Greeks could think up. It takes an Orpheus to get by, an Orpheus and the equivalent of his potent music.

A receptionist is stuck out in the front of the house for just one primary purpose: to keep a lot of cold-turkey salesmen out of the boss' hair. When she picks up her telephone and says, "Mr. Dotline to see Mr. Beetlebrow" and then says, "I'm sorry—Mr. Beetlebrow hasn't come in yet, and may not be in today" that doesn't mean she wasn't talking to the old walrus himself. She probably was, as a matter of fact. And Beetlebrow was probably saying, "Well, chase him out. I haven't time to see anyone."

Since it goes without saying that the salesman can't fill his dotted lines until he gets to the boss, the receptionist constitutes a problem. She's well worth studying, and a thorough working knowledge of the genus Receptionist pays cash dividends to salesmen.

In the first place, nowadays, she's practically a junior executive. I know several located in the front offices around New York who call their bosses "Jim," "Ed" and "Morry." Those young ladies have long since stopped thinking that a receptionist's job is a petty occupation; they've made big time business out of it.

The trouble is that the vast majority of salesmen don't realize it. They stride up to the desk with an expression on their faces that proclaims to the wide-world and especially to Miss Cerberus—that they aren't going to fritter away any time out here. Get the boss on the wire. Make it snappy. Tell him I'm ready to see him now.

And the young lady, reading the expression correctly, takes keen delight in saying, with a dead-pan: "You can't see him without an appointment. Sorry."

You can, of course. I'd like to have a tenth of one percent of the value of the merchandise that's sold to the boss without an appointment after some intelligent salesman has slid past the reception desk.

It's almost never accomplished with a trick. Receptionists have told me that tricks are old stuff to them. One type walks to the desk, turns his back almost to the receptionist, and says, briskly, "Get Charlie Simms on the wire. My name's Tootle-Smythe." The receptionist grins. Tootle-Smythe doesn't know "Charlie" Sims from Adam's pet goat. She counters that one with, "Oh, didn't you know? Charlie Sims is on his vacation." She gets a mighty big kick out of it when the "personal friend" says, "O, is he?" while Sims himself stands at his elbow and grins.

A line that infuriates most receptionists is: "I can't tell his personal business to a waiting room attendant. Tell him it's important. Never mind my name."

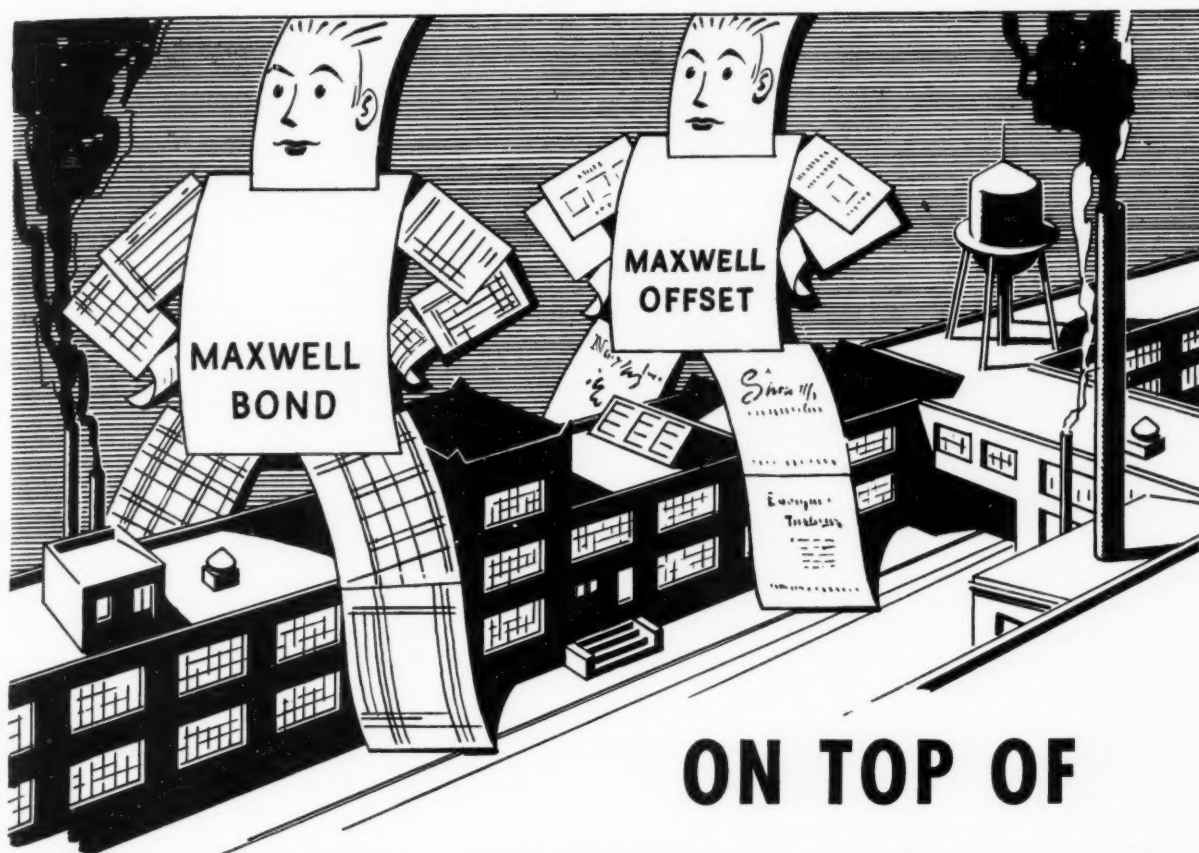
Her counter to that one is to call some stenographer inside the office and say, "Oh, Mr. Sims—there's a gentleman out here who won't give his name and says it's important." The stenographer inside says, "How about lunch at 12:30?" The receptionist says, "All right." She hangs up and says, "Mr. Sims says he's sorry, but he's catching a plane for Dubuque in twenty minutes. Come back next Thursday."

Once every so often a salesman, all trigged out in Ambassadorial garments, strides purposefully up to the desk and says: "Tell your president that Mr. Howland is here to see him." He then pulls out a watch, glances at it with a frown, and then looks up to fix the young lady with a cold stare.

She is quite likely to say, demurely, "If it's about a job, we haven't anything right now."

The Ambassadorial gentleman will explode quietly and say it's Not about a job at all; that it's a particularly important matter to the President, and that she is to ring him at once and tell him so. Safe in the knowledge that if the dignified bloke were as important as he looked, he

(Continued on page 125)



## ON TOP OF INDUSTRY'S PRINTING PROBLEMS

What are industry's biggest printing problems? **COST!** The Maxwell Twins are moderately priced for the big runs used by Big Business. **SPEED!** The Maxwell Twins help meet delivery dates by their faster press production. **PERFECTION!** The Maxwell Twins are ideal for work that must meet

the highest professional standards.

Quote sales literature on **MAXWELL OFFSET**—office and factory forms on **MAXWELL BOND**. Write today for samples of both.

**THE MAXWELL PAPER CO.**  
Franklin, Ohio

# MAXWELL BOND

WATERMARKED



# MAXWELL OFFSET

TUB-SIZED

**M A X W E L L I S M A D E W E L L**



MAXWELL BOND Envelopes, *quick adhesion, permanent stick*, made under our own management by our affiliated subsidiary **DAYTON ENVELOPE COMPANY, DAYTON, OHIO**



## Direct Advertising

**WHAT** is Direct Advertising? There are many definitions and, perhaps, one of the best is this—"Direct Advertising is personal selling reduced to type." Direct Advertising differs from other forms of advertising because it is "selective," it is directed to specific individuals rather than to the masses.

Can Direct Advertising be profitably used? The answer is Yes, in most cases, for what can be

- said by a salesman about a product or service that cannot be written? Nothing.
- shown by a salesman about a product or service that cannot be illustrated? Nothing.

Direct Advertising is an economic selling force. It accelerates sales because it

- automatically parallels the work of personal selling.
- breaks down sales resistances by placing cardinal facts before the prospect.
- wins goodwill and confidence.
- acts as an advance guard for salesmen and as a follow-up to their visits.
- introduces new products and service.
- increases interest in and desire for products and service.
- keeps asking for business.
- increases customers' and prospects' knowledge of a company, a product, a service.
- has sales-building possibilities at a profit.

Direct Advertising should not be regarded as being in competition with other forms of advertising. Direct Advertising supplements and strengthens all other forms of advertising. No one form of advertising can rightfully claim that it is the most profitable medium to use. Each form serves a particular purpose and for that purpose it is probably the most suitable and profitable form to use.

Direct Advertising possesses certain unquestioned advantages which are not found in other forms. And, due to these advantages, Direct Advertising can perform many sales and merchandising functions more effectively, economically and profitably than other forms of advertising. Among these advantages of Direct Advertising, the following may be listed:

**COMPREHENSIVE**—It offers an equal opportunity for promoting the sales of the manufacturer, the wholesaler, the jobber and the retailer.

**SELECTIVE**—The advertiser can select his list of prospects by territories, businesses, professions, executive positions, etc. The list may comprise one section of the country or all sections—one hundred names or a million.

**DIRECT**—The postage stamp will open every door. There is no such thing as "out" to its call. The advertiser can directly approach the prospect. The prospect receives exclusive consideration.

**TIMELY**—Mailings may be timed to suit exactly the nature of the work to be done. The messages can be sent anywhere at the most favorable time.

**ACCESSIBLE**—There is not a corner of the country that is inaccessible to the mails, and it is frequently off the beaten path that new business is secured.

**FLEXIBLE**—Can be whatever style, treatment, size and shape is desirable for the proper promotion of the subject. Can be made to fit the physical needs of any sales story. Can be localized.

**SELF-CONTAINED**—The message presents full information or stresses one particular sales feature based on particular needs of the buyer.

**CONTINUOUS**—Prospect can be written to over and over again.

**ECONOMICAL**—Can be started in a small way and increased as it succeeds. Is inexpensive because of no waste—it reaches the person to whom it is addressed.

**EFFECTIVE**—It presents the sales story from the viewpoint of the buyer and does not provoke competition.

**COORDINATES**—All sales forces are coordinated into intensive concentration of effort.

The physical forms of Direct Advertising are many and varied—they range all the way from a small mailing card and little envelope enclosures to big, smashing broadsides and great, elaborate catalogs. Each of the principal forms has its own place and use in the scheme of printed selling—each has been time-tested and is sales-worthy.

On the succeeding pages the more important forms of Direct Advertising are described and illustrated. Also, there follows a ready reference guide for the selection of papers for the various forms.

### THE CATALOG

The catalog ranks first among all forms of direct advertising, as the most important and most pre-



# FOR SHARP, CLEAR REPRODUCTIONS

## Use **LITHALOID** PAPER NEGATIVES



*"In Lithaloid you have unquestionably given this industry something most helpful"*

writes **LAKE PHOTOPRINT CO., Inc.**

Mr. Leo F. Westoff, President of the Lake Photoprint Co., Inc., of Chicago praises the exceptional qualities of Lithaloid. Here are his exact words:

*"For the past five years we have used your Lithaloid negative paper in various departments of our plant and find that the fine quality of your product is a contributing factor to our success in producing a better grade of planograph and offset printing.*

*In Lithaloid you have unquestionably given this industry something most helpful."*

The fine quality of Lithaloid has been a large factor in the success of many companies. For Lithaloid does a thorough job. It reproduces the tough jobs with extreme contrast making for perfect reproduction. Gives exceptional uniformity. Keeps negative production at top speed . . . develops in 1½ to 2 minutes with standard developers. Yet costs no more than ordinary papers. Reason enough why leading lithographers are turning to Lithaloid.

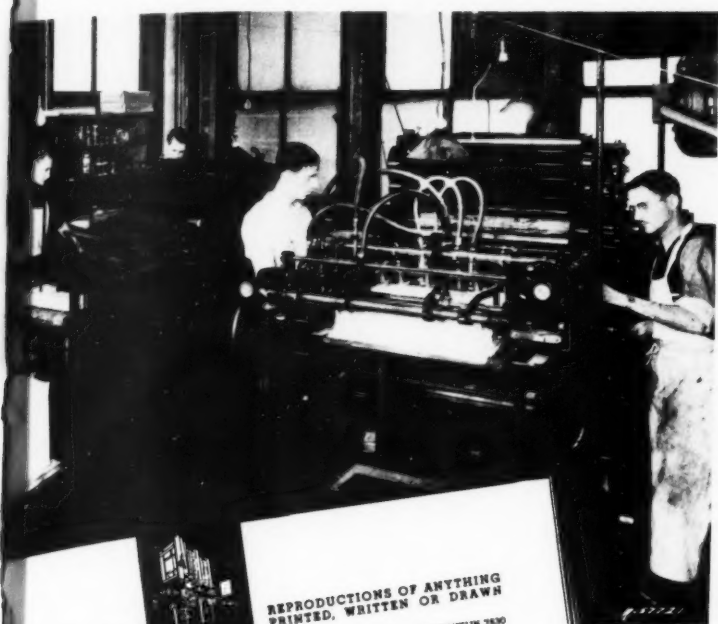
### **Prove It Under Your Own Conditions.**

We'll send you a liberal test supply of Lithaloid, a difficult original and a Lithaloid negative of it. Compare results on any other negative paper. Lithaloid's superiority will convince you.

## **THE HALOID COMPANY** ROCHESTER, N. Y.

Boston Office . . . . . 141 Milk St.	New York Office . . . . . 330 W. 42nd St.
Chicago Office . . . . . 608 So. Dearborn St.	Philadelphia Office . . . . . 1015 Chestnut St.
Detroit Office . . . . . 149 Lafayette Blvd.	San Francisco Office . . . . . 222 Kearny St.
Los Angeles Office . . . . . 714 South Hill St.	Washington Office . . . . . 15th & K Sts., N. W.

Canadian Distributors, Rectigraph Co. of Canada, Ltd., Toronto  
Texas and Oklahoma Distributor, Jno. J. Johnson  
1912 St. Paul St., Dallas, Texas



**LAKE  
PHOTOPRINT CO., INC.**  
193 WELLS ST.  
CHICAGO, ILL.

REPRODUCTIONS OF ANYTHING  
PRINTED, WRITTEN OR DRAWN  
ALL PHONES FRANKLIN 7630

February 9-1937.

The Haloid Company,  
Rochester, New York.  
Gentlemen:-

For the past five years we have used your Lithaloid negative paper in various departments of our plant and find that the fine quality of your product is a contributing factor to our success in producing a better grade of planograph and offset printing.

In Lithaloid you have unquestionably given this industry something most helpful.

With best wishes.

Cordially yours,

**LAKE PHOTOPRINT COMPANY, INC.**  
*Leo F. Westoff*

L. F. Westhoff-VF.

PROTOTYPES - PHOTO OFFSET PRINTING - TRACING REPRODUCTIONS - BLUEPRINTS

tentious printed representative of manufacturers and mercantile establishments. It is an essential adjunct to many forms of business—the basic printed selling force—the picture the buyer has of the business and the products of that business. In the case of those businesses which sell by mail entirely, it is practically the only form of advertising used, and anything else that is published by them is generally supplementary to the catalog itself.

In its simplest form, the catalog may be a small pocket or desk size book containing merely a complete descriptive list with prices. Or, it may be a large and elaborate book in which descriptions and illustrations of the various items, sales arguments for the products, testimonials and action photographs, facilities and production methods, general information, a history of the business, special features, service, and the like, are portrayed.

The uses of catalogs are obvious. All too few firms appreciate the importance of proper planning. Catalogs should be designed to fit the filing space of the group for whom they are intended. They should be convenient for ready reference. The illustrations should reflect a striking sales appeal and should have a definite reason for being in the catalog. The type should be alluring and easy to read. The type and the illustrations should be arranged in an attractive manner.

#### THE BOOKLET

Booklets are the most varied and useful part of almost all direct advertising campaigns. Being primarily informative, booklets are used by sellers of products or services that require long and detailed description or illustration. Because booklets are more occasional in their nature, they lack the comprehensive character of the catalog, but there is no form of direct advertising that adapts itself so well for spreading knowledge and understanding of a business as a booklet.

Booklets are flexible units. They may be small, eight-page pieces or large elaborate de luxe units, as determined by the space needed to tell the word and picture story of interest to the reader. Booklets may be informative, institutional or testimonial in nature. They are used to tell the history or origin of a company or a product; to supply information on how to install or use a product; to present a list of satisfied users or testimonials and proof of good service; to describe some special feature or interest-

ing experience that illustrates an essential point of the sales argument.

Sent out in advance of a salesman's call, the booklet enables the prospect to partly inform himself about the merits of a product or service, thus conserving the salesman's time by making it unnecessary for him to make long and detailed explanations. Used by a salesman during his sales canvass, the booklet helps the salesman to properly organize and logically present his story without any wasted effort. And, left with the prospect, the booklet permits him to study it at his leisure.

Booklets are not the type of direct advertising that "flash" the sales message. They are intended for thorough reading and must, therefore, be attractive, interesting and easy to read.

#### THE CIRCULAR AND FOLDER

Circulars and folders are probably the most commonly used forms of direct advertising literature. They are often described by some authorities on direct advertising as "occasional visitors who build good business." They make shorter calls, present briefer messages, and are generally used in a series of four or more. They may be used to secure direct orders, to act as good-will ambassadors, or to serve as continuous contacts to break down sales resistances and leave it up to a booklet or a salesman, or both, to gain the final decision.

Circulars and folders have several distinct advantages to make them valuable to most sales and advertising campaigns. The advertiser can keep his company and his products before his customers and prospective customers by means of circulars and folders at relatively low cost. A series of circulars and folders forming a complete direct advertising campaign may be printed at one time to keep down mechanical costs. In addition to being used in a series, circulars and folders are also used to break up the monotony of other commonly used forms of direct advertising.

Because they are relatively small in size, circulars and folders are adaptable to unique "stunt" effects. They can be folded into an astonishing variety of ways, as many as the cleverness and ingenuity of the creative genius can devise. And, novel die-cuts may be used to increase the attention-getting value.

As is true with all forms of direct advertising literature, circulars and folders must be attractive enough to gain attention, for the appearance of the printed piece very often determines whether it will be read by the prospect.

# **MOLLETON**

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*flannel*

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## **RUBBER BLANKETS**

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SEWN MOLLETON & FLANNEL COVERS

---

SEAMLESS MOLLETON & FLANNEL COVERS

---

DAMPERS . . . LEATHER ROLLERS

---

HAND ROLLERS . . . SCRAPER LEATHER

---

SEAMLESS FOUNTAIN ROLLER COVERS

---

## **ROBERTS & PORTER**

**I N C O R P O R A T E D**

ESTABLISHED IN THE LITHO SUPPLY BUSINESS OVER FORTY YEARS

**New York: 100 Lafayette St., Phone: CAnal 6-1646**

**Chicago: 402 S. Market St., Phone: WABash 6935**

CANADIAN AGENT: CANADIAN FINE COLOR CO., 240 LOGAN AVE., TORONTO

### THE BROADSIDE

The broadside has one principal characteristic to distinguish it from other forms of direct advertising literature. When opened out it presents a broad expanse of paper. Because of its size the advertiser can use any form of typography and large illustrations, or many small ones.

The broadside is the logical direct advertising medium to use when a large single sheet is needed to present the sales message to the best advantage. The principal reason for using a broadside is to get over the idea of bigness—to make a flash or smash impression—to present the sales story in such a way as to make it easy for the prospect to grasp it and act upon it.

Broadsides fit into a direct advertising campaign as attention getters. They are used to announce bargain sales—new products or services—improvements. They often prove especially effective as the “opening gun” of a campaign, to blare forth the principal sales arguments.

In effect, a broadside is an advertising folder of large size which is folded several times for mailing purposes. In a folder, however, each fold is generally laid out as a separate page or unit, but the broadside is designed so that the whole sheet constitutes the advertisement. In a broadside the copy and illustrations are placed right over the folds and it is, therefore, necessary that a paper which has good folding qualities be used.

### THE HOUSE ORGAN

The house magazine, commonly known as the house organ, is essentially the most institutional of all forms of direct advertising. There is no other form of printed literature that can develop so much personality—reflect the spirit of a business so truly—create such widespread acquaintanceship—build such valuable goodwill, as can a properly published house magazine. The house magazine is a potential sales help capable of making known to thousands of customers and prospects the company behind the product, the people who conduct it, its methods, its motives, its policies.

As the name indicates, the house magazine is a publication issued at regular intervals by a business establishment to tell its story to a specified group of people. There are two general classes of house magazines—the consumer publication and the employee magazine.

The consumer magazine is used to tell the story

of a product or service to the ultimate consumer—to help the consumer get the most from what he buys—to instruct the consumer as to the use of the product—to increase sales—to build goodwill.

The employee magazine is used to maintain morale, unify a scattered sales organization, to speed up sales contests, to transmit sales ideas, to promote safety and efficiency, in short, to make better salesmen and workmen.

Good illustrations, good copy, good typography, good printing and good paper all help to make the house magazine more effective and profitable. The kind of engravings, the question of cost, the impression desired to be created—all have a bearing on the selection of the paper.

### THE ENVELOPE ENCLOSURE AND PACKAGE INSERT

Envelope enclosures and package inserts are the most economical of all forms of direct advertising. Their cost of distribution is insignificant and the cost of preparation is small. Yet, the possibilities saleswise from them is great. They are powerful and effective advertising mediums and the possibilities for new business from their use is tremendous. A well-planned series of envelope enclosures and package inserts will put extra “punch” into a direct advertising campaign.

Envelope enclosures and package inserts are usually small in size. They may be single leaflets, folders, or small booklets. Because of their limitations in size, they are not generally classed as basic forms of direct advertising, yet they do serve as valuable mediums for reminders and suggestions.

Envelope enclosures are more aptly termed by some authorities as “*postage margin savers*.” Since they are almost exclusively used as enclosures with first-class mail, they represent the unused margin between the weight of the letter itself and the weight to which sender is entitled under the postal rate. They are used to spread the story of a product, to amplify some sales point made in the letter, or to call attention to some special feature.

The principal purpose of package inserts is not to bring a product to the attention of new prospects, but rather to keep present customers sold and to enlarge their interest and patronage. Package inserts are used to tell the purchaser how to use the product, to suggest additional uses for the product, to list other products made by the manufacturer, to induce buyers to send for samples, to secure names for a mailing list, and so on.

Good paper is essential for envelope enclosures



# MERCK CHEMICALS



FOR THE  
PHOTO-  
LITHOGRAPHER

★  
EGG  
ALBUMIN

Ammonium Dichromate

Hydroquinone

Photol

Hypo

Sodium Sulfite

Chromic Acid

Acid Phosphoric

Silver Nitrate

Sodium Carbonate

Potassium Bromide

**W**HETHER your chemical requirements are limited or diversified; whether you use chemicals in a few or many ways; in large or small amounts — the Merck Photo-Lithographic Line provides exactly the right product for every chemical need.

Merck Lithographic Chemicals are packaged from the standpoint of service and practicability. They are economically priced. They are available promptly from adequate stocks maintained at Rahway, St. Louis, New York, Philadelphia and Montreal. *Use them for uniformly fine results.*

★ **MERCK & CO. Inc.** *Manufacturing Chemists* **RAHWAY, N. J.** ★

New York • Philadelphia • St. Louis • In Canada: Merck & Co. Ltd., Montreal • Toronto  
SEPTEMBER 1937

and package inserts in order to gain attention and invite reading. In short, "To get more out of printed matter, put more into it."

#### THE MAILING CARD

Mailing cards are one of the least expensive forms of direct advertising. They are a convenient and widely used form of direct advertising because they have high attention value, can be produced at comparatively low cost, and can insure a reading since they require but little of the recipient's time.

Most advertising campaigns can be made more effective and profitable by the use of mailing cards. Well designed mailing cards are valuable mediums for making brief announcements, for introducing elaborate catalogs and booklets, for recalling something of interest in a catalog or a booklet after it has been received, for bridging the gaps between the mailings of more expensive forms of direct advertising, to precede and to present salesmen and to give greater continuity to a direct advertising campaign at relatively little expense. Mailing cards are often used in a series because they carry a brief message and deal with but one phase of the advertising campaign at a time. They are also used as reminders and creators of goodwill.

Return mailing cards enclosed with products or in other forms of direct advertising are used to make it easy for the prospect to reply—either with an order or a request. By means of attractive and interesting return mailing cards, prospective customers may be induced to write for additional information or a sample, to ask for a salesman to call, or to make an appointment for a demonstration.

Double post cards are an ideal way to provide the recipient with a return card upon which the advertiser has paid the postage. Such cards give the advertiser an effective sales message to which a reply card is attached, for very small cost. More and more are advertisers using double post cards effectively and profitably in direct advertising.

The paper used for mailing cards must be selected with care. It must possess sufficient strength to travel in the mails and reach the prospect in good condition; must have a good printing surface so that the type and illustrations will be well reproduced; and, for folded cards, the stock used must have good folding qualities.

#### THE ILLUSTRATED LETTER

Illustrated letters are widely used in direct advertising for various reasons, namely, they offer

the personal touch of a letter to the descriptive matter on the inside pages, the letter portion gains attention because business men read typewritten letters through force of habit, the illustrations tell the story quickly and impressively, and they enable the advertiser to briefly cover in the letter the broad sales points that will arouse the prospect's interest, leaving the telling of the rest of the story to the succeeding pages. These facts make a splendid sales combination. In brief, illustrated letters are a convenient means of illustrating the product about which a letter is written.

Illustrated letters are often used in a series to enable the advertiser to picture a different sales point in each letter. Persistent follow-up of this kind breaks down sales resistances and puts the prospect in the mood to buy. The series may be used to pave the way for salesmen or to secure direct action.

Illustrated letters may be effectively used as a third or fourth mailing piece in a direct mail campaign to elaborate on the sales arguments brought out in the preceding mailings, and also as the final piece of the campaign to sum up the various reasons why the prospect should buy. Such letters are usually of four pages.

---

#### Color Test

Investigators have made careful tests with a view to deciding the legibility of colored letters on colored papers, the distance, size and form of the types used, and other conditions being the same.

The following list shows the findings in order of legibility:

1. Black letters on yellow paper
2. Green letters on white paper
3. Blue letters on white paper
4. White letters on blue paper
5. Black letters on white paper
6. Yellow letters on black paper
7. White letters on red paper
8. White letters on green paper
9. White letters on black paper
10. Red letters on yellow paper
11. Green letters on red paper
12. Red letters on green paper.

# MODERN MILEAGE

THE super-highways of today are the result of careful planning to give smoother, uninterrupted travel and to remove obstacles which once seemed insurmountable.

Modern mileage in lithographic rollers has also been achieved through careful planning for a long, useful life plus ability to smooth out difficulties once accepted as a part of the game.

Lithographers expect steady performance and results of the finest quality as well as longevity. Ideal Lithographic Rollers have proved their ability to meet these requirements:

- FULL AND UNIFORM COLOR THROUGHOUT LIFE
- ECONOMY OF INK
- PROPER AFFINITY FOR INK
- PROPER WATER CONTROL (NO GRAYING OUT)
- EASILY CLEANED (NO INK PENETRATION)
- EASY AND ACCURATE SETTING
- ECONOMY OF PRESS TIME
- ABSOLUTE CONCENTRICITY (NO LOW SPOTS)
- ELIMINATION OF WEAR ON PLATES

Ideal Lithographic Rollers do not have to be broken in; they print clear, fresh colors from the first impression on.

All types of materials are available as coverings for Ideal Lithographic Rollers to meet every unusual condition that may arise. Combined with Ideal Vanitex Offset Blankets, the lithographer has a truly ideal press dressing.

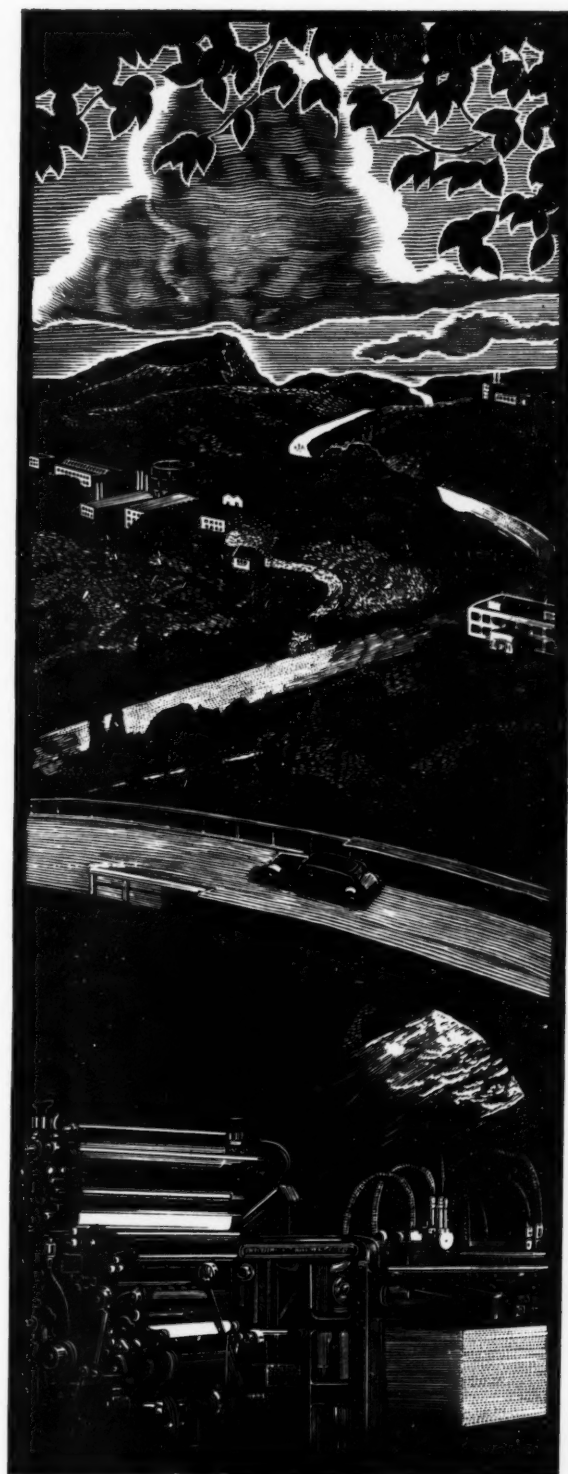
Today is an opportune time to adopt this modern equipment. An efficient representative of this company awaits the pleasure of serving you.



## IDEAL ROLLER & MANUFACTURING CO.

CHICAGO . . . . NEW YORK

Branch sales and service offices are located in principal cities





# HOW SHOULD FILM BE HANDLED?

## EDITOR'S NOTE

*Inasmuch as current domestic and foreign trade literature have discussed the advantages of photographic film over plates and taken for granted that all the points involved are well established with the reader from such literature and practical experience, the following article is considered timely and we hope of definite interest.*

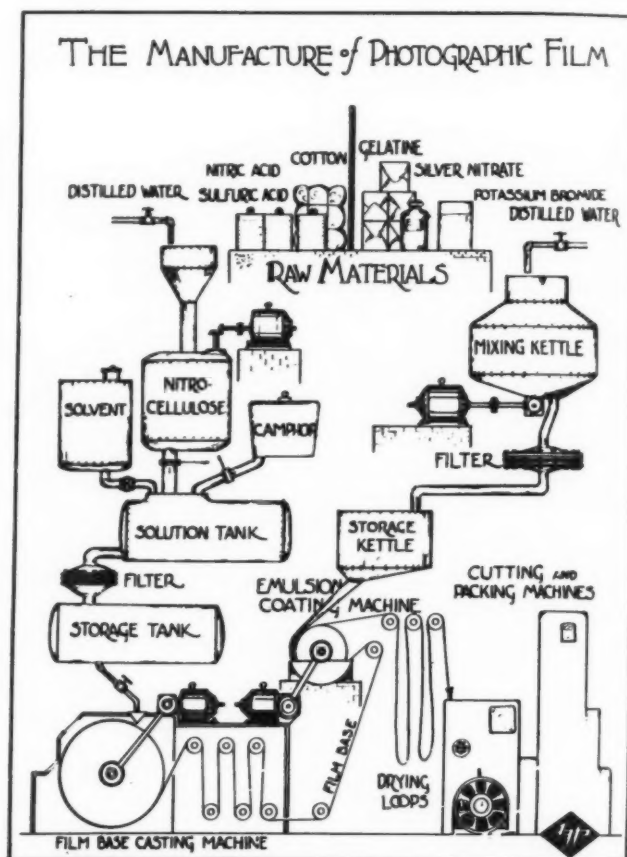
**P**HOTOGRAPHIC film is made with exacting care under modern scientifically controlled conditions, whether it is intended for professional use or for the inexpensive amateur camera. Although made in many different types, film is fundamentally the same in both manufacture and composition. Inasmuch as film users show increased interest in the very nature of this material it is timely to consider its structure.

Photographic film consists of two basic parts—the support or film base, and the light-sensitive emulsion. For better understanding of the basic elements let us disregard additional features such as anti-halation provisions, special coating manipulations, etc., which have placed film in its present advanced stage of development. The support is a transparent flexible material which is produced by the treatment of cellulose or cotton with various chemicals. When manufactured as cellulose nitrate, the film base is referred to as “nitrate” (inflammable); however, when produced in the cellulose acetate form, it is called “safety base” (non-inflammable). The latter is generally supplied in all large cities where fire regulations, based on underwriters' specifications, make the use of safety film imperative.

As experiences have proven that intricate matters are easier explained by sketches than mere words, the drawing on this page illustrating the various steps in the manufacture of photographic film, will give the reader an idea of the complicated process necessary to place in his hands the material with which he is so familiar.

Every manufacturer follows his own procedure in the making of film base. Special and continually-tested materials are used to make certain that the final product will be of highest standard. Moreover, constant research in exacting laboratories and highest skill in quantity production are the essentials to keep abreast with the requirement of discriminating photo-lithographers, caused by the steady increase in use of film over plates for multi-color work. This requirement is nothing less than the expectation of controlled shrinkage and expansion to which film is subject during and after processing. Shrinkage and expansion both result from the fact that not only the emulsion but also the film base absorb water during the

stages of processing: developing, fixing, and especially washing. The least “damage” in this respect can be done during developing as time and temperature are constant with the trade, by which is meant that it rarely resorts to development exceeding three minutes with all reproduction litho films.



First trouble is sometimes caused by unnecessary long fixing in acid hypo baths containing hardener. Because of the extreme thinness of the emulsion complete fixing is effected in very short time. Practically speaking this means not more than three minutes in a bath of standard strength. Due to the fact that the modern offset film already represents a very high degree of physical hardening incorporated during production. Practical experiences have proven that a fixing bath with hardener can well be substituted with a so-called acid hypo bath containing Potassium Metabisulphite. This practice will spare the film forced contraction. The washing time in running water should not exceed the total of developing and fixing time, namely, six minutes. This can be reduced to three minutes in emergency.

THE PHOTO-LITHOGRAPHER



*Better Finished Negatives  
in Shorter Time*

*Dependable Press Plates  
in a Flash*

*An Opaque That Really  
Opagues*

*At Last: A Perfect*

## OKAY OPAQUE

- ★ SMOOTH FLOWING FOR THE RAPID BRUSH SWEEP
- ★ DENSE OPACITY
- ★ DRY QUICKLY
- ★ NON-CRACKING

## OKAY DEVELOPER

- ★ EASILY APPLIED TO ANY METAL
- ★ CLEAR, SHARP AND ACID RESISTANT IMAGE
- ★ STAND UP FOR LONG PRESS LIFE
- ★ RELEASE EASILY, UNDER HIGH HUMIDITY FROM BARE GRAIN

Two ★ ★ ★ ★ numbers that have clicked in a big way

## CELLULOSE OPAQUE

(FOR MASKING)

Cellulose Opaque is designed primarily for the production of an opaque film on Nitrocellulose and Acetate cellulose masking sheets. The following characteristics represent five points of superiority:-

1. Lays smooth and will not creep or run.
2. One application gives a film of dense opacity.
3. Dries quickly and is non-cracking.
4. Film easily removed with water.
5. No preparation on surface of sheet is necessary to get a "bite".

## WET PROCESS OPAQUE

(OIL BASE)

The necessity for a satisfactory oil base opaque designed specially for the wet process has long been apparent. After considerable research, we have developed a wet process opaque with the following valuable properties:-

1. It has an extremely smooth film and will not pile up.
2. Will hold tenaciously on the glass.
3. One application gives a film of dense opacity.
4. Perfectly sharp lines may be cut without chipping.
5. The film is easily removed with alcohol.
6. It will not injure the negative.
7. Will not chip or flake under heat.
8. Can be used in ruling pens.

**ONE TRIAL OF OUR "ART" PHOTO LITHOGRAPHIC BLACK WILL CONVINC  
YOU OF ITS DENSITY, GLOSS, AND NON-OFFSETTING QUALITIES**

All of the above Photo Offset Specialties manufactured and  
distributed solely by

**FRANCIS G. OKIE CO.**  
**247 S. THIRD ST., PHILADELPHIA, PA.**

or their Agents. Also manufacturers of High Grade Photo Offset Inks,  
Fine Printing Inks, Compounds, etc.

**SAMPLES  
CHEERFULLY  
SUBMITTED  
AT YOUR  
REQUEST**

The processing of film up to the time where it is ready for drying does not end the possibility of shrinkage and expansion which the photo-lithographer has to consider. Of equal importance is the phase of film drying. In the aforesaid it was mentioned that not only the emulsion, but the film base as well absorb water and expand during the processing stage. It is therefore necessary to assure that the film dries to the point which the trade terms "bone-dry" which causes the film to go back to its original size. It appears logical that, for instance, positives of a four color set must necessarily be processed and dried under uniform conditions and for the same length of time. Only in plants with modernly equipped and accurately controlled temperature and humidity conditions will it be feasible to split the aforementioned four color positive set thus making two today and the consecutive two tomorrow, with the assurance that they will register. It is imperative that the second positive lot has reached the stage of "bone-dry"-ness before it is passed on for further operation.

Operators working under ordinary conditions, subject to great variation as to temperature and humidity content must bear in mind that respective color sets have to be handled uniformly which refers not only to drying, but also to opaquing and intermittent storage.

Opaquing is a particularly interesting step in this connection. Any opaquing table without proper ventilation provisions necessarily heats up the top ground-glass on which the film is placed for opaquing. Thereby the film is dried gradually, but unevenly, depending upon the length of time it is permitted to rest on the warm or hot glass.

Any average layman unquestionably would be greatly impressed with the infinite care taken of the film not only during its production but also during storage before the consumer receives it. Uniform results can only be expected if the same attention and care is given to respective film packages during storage at customer's quarters before they reach camera, projection, or contact rooms. Cut film, regardless of size, should be kept in horizontal position evenly supported over the entire area away from radiators, steam pipes, open doors and windows.

The question of sorting processed film for economical handling of repeat-print orders is of great importance to many organizations. Some have solved it satisfactorily with the construction or purchase of special metal cabinets which placed in a cool, dry room, give reasonable assurance of least fluctuation in temperature and humidity conditions. These cabinets are of the movable drawer type and store the film flat in a horizontal position.

All of the aforesaid culminates in the point that photographic film is a sensitive medium throughout its manufacture, handling and storage of finished negatives and positives.

The advancement of film and its high competitive standing to plates have been sufficiently demonstrated

during the past few years and beyond a doubt this natural development points the way toward increased popularity. Practical experiences have definitely proven that film can replace plates most satisfactorily in many intermittent working steps in photo-lithography. While experienced operators have found no difficulty in handling film, the newcomer should bear in mind that care, coupled with intelligent handling, lead the way toward greater efficiency and genuine progress.

**Be sure to make reservations for yourself and your key men to the Hotel Hollenden, Cleveland, Ohio, for the greatest photo-lithographic convention ever held in the country.**

**The foremen of your camera, plate and press departments can witness demonstrations of color separation, deep-etch plate making and the running of plates on equipment in two lithographic plants.**

**Registration fee \$2.00 each. Please write Secretary of the National Association of Photo-Lithographers, 1776 Broadway, New York City, saying how many will be present from your firm at the N. A. P. L. Convention at the Hotel Hollenden, Cleveland, Ohio, October 14-15-16.**

It is with regret that we advise you of the death of Fred L. Tubbs, vice-president of the Miehle Printing Press and Manufacturing Company, on Tuesday, August 3, after a brief illness of only a week.

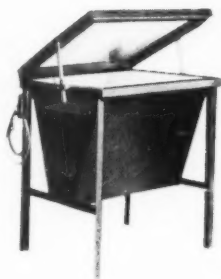
Mr. Tubbs had been in charge of the Chicago City Sales Office since 1923.

Mr. William J. McWilliams, who has been with the Miehle Company since 1911 and for many years connected with the Main Office Sales Department, has been transferred to the Chicago City Sales Office at 53 West Jackson Boulevard to take charge of the letterpress division, succeeding the late Mr. Tubbs.

# Double-Value

1. Save Money in Equipment
2. Save Money in Production

Many of our customers have found that this double saving has developed their business. We have served them many times in their growth from small to larger presses. In serving them we have grown with them and are today offering the industry the combined practical experience of our mutual growth.



**MILES LAYOUT TABLE**

This table is built of all metal, has double diffused glass, two sides perpendicular so that parallel and perpendicular lines can be drawn. It can be supplied flat, tilting, or in combination. Standard sizes:

26 x 30  
40 x 50  
52 x 72

Special sizes to order

This frame is designed to enable the operator to work on all four sides and to register color work accurately upon the plate. It will deliver clean, crisp, sharp prints at extremely low cost. Standard sizes:

30 x 40  
40 x 60  
50 x 60  
54 x 74

Special sizes to order

**MILES NEGATIVE and DOT REDUCING TABLE**

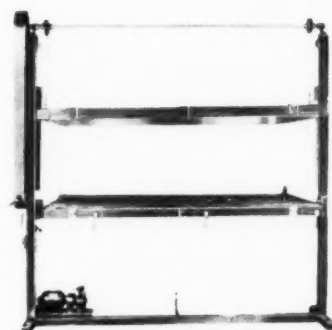
This table is used for reducing the dot in color negatives, and reducing and clearing black and white negatives. The operator's hands are free to work on the negative, and the water is completely controlled by foot pedal. Standard size: 26 x 30. Special sizes to order



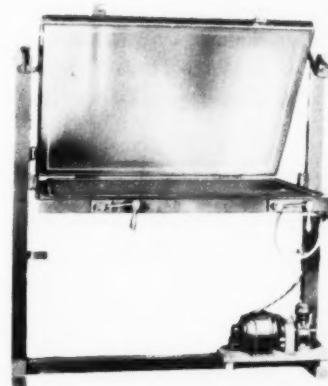
This frame is the glass raising type hinged at the back, and will deliver black and white or color plates at extremely low prices. It is sturdily built, and very efficient in its operation. Standard sizes:

22 x 28  
30 x 40  
40 x 60  
50 x 60  
54 x 74

Special sizes to order



**MILES GLASS RAISING VACUUM PRINTING FRAME**



**MILES STANDARD VACUUM PRINTING FRAME**

## MILES MACHINERY COMPANY

Telephone: ALgonquin 4-2466 • • 18 East 16th Street, New York

**PLATE MAKING EQUIPMENT SPECIALISTS**

SEPTEMBER 1937



## Technical Foundation Announces Schedule of Courses

**T**HE Lithographic Technical Foundation, 220 East 42d Street, New York, N. Y., has announced its 1937-1938 sessions of special courses for lithographers. All shop courses will be presented at the spacious lithographic department of the New York Trade School, 324 East 67th Street, New York, N. Y. Equipment valued at \$42,000, all of which has been made available for school use by manufacturers, is being installed. The courses have been designed to meet the needs of every type of lithographic shop and office employee.

Application for all shop courses must be made personally and in written form, except where remote residence makes such procedure impossible. A special application form is available for use in this connection. Immediate application is imperative, since shop classes will soon be filled.

Class sessions will be held from 7.15 to 9.15 on Mondays, Wednesdays and Fridays. The courses offered are listed below:

**Management in Lithography**—An intensive non-technical survey and study of lithographic and related printing processes. The course includes twelve planned visits to as many plants. Tuition \$28.00. Instructor, Wm. M. Winship, Asst. General Manager in Charge of Sales, U. S. Printing & Litho. Co.

**Cost Finding and Estimating**—A course with three objectives: acquainting students with the basic principles of cost finding and estimating as practiced in lithographing plants; teaching how to determine the costs of representative orders; and providing practice under expert direction. Tuition \$16.00. Mr. G. M. Lucas, Secretary, Trautmann, Bailey & Blampey, in charge.

**Color Mixing**—A course which indicates the procedures essential to success in color matching with reasons for the same and provides practical aid to those having color-mixing difficulties. Each student is provided a full set of tools and materials for color mixing work. Tuition \$5.00. (This course is offered whenever the registration warrants.)

**Technology of Lithographic Processes, Materials and Equipment**—A course designed to bring to key men in the industry the results of technical research in the fields of photography, of pressroom equipment, of materials and of processes that are significantly related to lithographic printing. The 1937-38 program will give attention to press construction and operation, paper problems, air conditioning, press plate making, color correcting. Tuition \$10.00. This course deals largely with technical questions and problems; therefore, those with nothing more than practical experience are advised not to enroll.

**Science of Photographic and Plate Making Procedures**—A course providing experienced photographers, retouchers and plate makers with a non-technical explanation of the "whys" and "wherefores" of the various photo-lithographic procedures. Demonstrations and illustrations constitute important features of the course. Tuition \$15.00. Mr. Kenneth W. Martin, Harold B. Pitman Company, in charge.

**Selling Lithography A**—A course in marketing lithography for key men in sales work. This course definitely answers certain questions which bother alert sales executives. For example,

1. In what respects are we falling short of possibilities in our present field?
2. What possibilities, in the way of new markets, are we definitely overlooking?
3. In what respects are we failing to use the most effective means of publicizing our business?
4. How may we assist our salesmen to greater mutual advantage?
5. How may our present means of stimulating sales effort be improved?
6. What available sources of information are we failing to utilize in connection with our sales promotion work?

Tuition \$80.00. Mr. J. C. Menken, Education Department, Lithographer's National Association, in charge.

**Selling Lithography B**—A course dealing with the significant features of that type of constructive selling which calls for detailed knowledge of the marketing and the advertising procedures peculiar to specific products, and the ability to analyze and plan. Attention is also given in this course to ways and means of discovering the information needed and of ascertaining how to get hold of such information. Tuition \$16.50. Mr. Alfred Soman, Zeese-Wilkinson Company, in charge.

**Selling Lithography C**—A course dealing with actual cases of constructive salesmanship. Major attention is given in this course to developing sound sales plans for specific products, critically considering plans already set up and formulating specific guides for those who wish to sell constructively. Open only to candidates with credit for Selling Lithography B or its equivalent. Tuition \$16.50. Mr. Alfred Soman in charge.

**Selling Lithography D**—A knowledge of production course treating comparatively the more significant graphic arts processes and procedures together with their respective advantages and disadvantages in connection with sales. Emphasis is placed upon making



HE CAN SPECIFY THE PAPER

*If  
you specify*



# ECLIPSE

## DEEP-SET BLACK

**You will find this ink all you expect. Prints sharp and clean, and gives that intense contrast so necessary for the best results.**

**W**HATEVER the paper specified, you will get the best results from Eclipse Deep-Set Black. Made especially for deep-etch plates, Eclipse prints sharp and clean, and provides the intense contrast necessary for satisfactory results.

When using deep-etch plates always specify Eclipse Deep-Set Black, the ink made for the plate. This is but one of the high-quality offset inks we manufacture. Whether you need offset or letterpress inks you will find that both our blacks and our colors are uniformly dependable.

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intelligent use of the facts rather than upon the mere possession of such facts. Tuition \$7.50. Mr. William Winship, Sales Manager, U. S. Prtg. & Litho. Co. in charge.

**Science of Pressroom Procedures**—A course of non-technical nature which indicates to pressmen and press operators why certain practices have proved satisfactory and others unsatisfactory. The latest developments of scientific nature relating to paper, plates, blankets, inks, and plate making are considered in this course. Tuition \$15.00.

**Foremanship A**—A course giving consideration to the basic principles of foremanship. The foreman's job—his qualifications—his supervisory responsibilities—his managerial responsibilities—his relation to production—how and why costs are kept—relation of overhead to direct labor, etc. Open only to assistant foremen and prospective foremen. Not more than 20 will be admitted. Tuition \$20.00. Instructor to be announced.

**Foremanship B**—A course for experienced foremen dealing with the human element in industry. Topics considered: selection of workers, getting men to work together, taking care of the new man, holding the working force, handling complaints, etc. The conference or round-table method is used, each member being privileged to participate in the discussion. Not more than 16 will be admitted. Tuition \$25.00. Instructor to be announced.

*Explanatory Note:* To the end that maximum results may be realized, enrollment in the various shop courses which follow will be limited. For example, not to exceed 12 will be enrolled in the offset press class.

**Camera A**—A course dealing with line work on film and paper which treats in a practical way all operations and processes associated therewith. Tuition \$15.00. Instructor to be announced.

**Camera B**—A course giving consideration to the most important features of half-tone work as practiced in lithographing plants. Open only to those with credit for Camera A or who satisfy the instructor that they have the equivalent. Tuition \$15.00. Instructor to be announced.

**Camera C**—A course dealing in a practical way with important phases of color-separation processes as carried on in lithographing plants. Open only to students with credit for Camera B or its equivalent. Tuition \$30.00. Mr. Philip Quarterraro, Kindred-McLean Company, instructor.

**Camera D**—This course meets the specific needs of journeymen with troublesome production problems in line and half-tone work to meet from day to day. The content of the course is determined by the nature of the difficulties experienced. Tuition \$15.00. Instructor to be announced.

**Camera E**—This course meets the specific needs of journeymen with troublesome production problems in the color-separation field. The content of the course depends in part upon the nature of the questions asked and the problems cited. Tuition \$15.00. Instructor, Philip Quarterraro.

**Color Correcting A**—A course stressing ability to judge values in photographic plates and films, ability to estimate color values in the copy and ability to retouch (groundglass method). Each student is provided with a set of color separations; also the necessary proofs for his progressive proof book. Tuition \$36.00. Mr. James Castellano, art department foreman, Industrial Lithographing Co., instructor.

**Color Correcting B**—A course with the same objective as Color Correcting A but limiting consideration to what is known as the dot etching method. Tuition \$36.00. Mr. James Castellano, instructor.

**Color Correcting C**—A course for journeymen giving attention to methods of handling different types of jobs so as to effect desirable economies, to ways and means of dealing with types of production difficulties, etc. Open only to those who can satisfy the instructor that they have had adequate experience. Tuition \$18.00. Mr. James Castellano, instructor.

**Plate Making A**—A practical course in which all phases of plate making by means of photography are considered in detail. All well-established methods are included. Learning to operate the whirler, the vacuum printing frame and the photo-composer constitute a part of this course. Tuition \$15.00. Mr. Joseph Mazzaferri, Offset Engraver's Association in charge.

**Plate Making B**—A course for experienced plate makers devoted to the solution of difficulties peculiar to plate-making departments, regardless of method; also to effective means of restoring defective plates. Tuition \$15.00. Mr. Joseph Mazzaferri, Offset Engraver's Association Instructor.

**Press Operating A**—A course dealing with such features of offset press work, as setting rollers, putting on and adjusting the blanket, setting the pressure, setting sheetfeeding guides, oiling the press, removing and replacing the plate (no packing), cleaning up, etc. Tuition \$15.00. Instructor to be announced.

**Press Operating B**—A continuance of Press Operating A giving attention to packing in connection with the blanket and the plate—to setting pressure on impression cylinder, to preparing the fountain solution, to inking up, to getting the lay on the simple type of job, etc. Open only to those with credit for Press Operating A or its equivalent. Tuition \$15.00. Instructor to be announced.

# Consider Equipment with Distinctive Advantages

## Wesel Plate-Coating Machine

(Right)

• This machine has an automatic *air-circulating* device that attracts no dust from outside. *A distinctive advantage.* Requires no extra motor for that purpose. Keeps the warm air *uniform and in constant motion*,—a factor insuring speed, consistency and cleanliness.

Driven by direct-connected, geared-head motor for positive and constant speeds, controlled by variable speed regulator.

In addition to the copper washing spray with automatic cut-off, this machine is fitted with a perforated copper spray pipe for cleansing the housing.

*Aluminum Alloy* revolving table; rustless alloy steel drum (not tin); ballbearing construction; adjustable legs; convenient drain connections; pilot light, etc.



*Made in all Standard Sizes*



## Wesel Automatic Vacuum Printing Frame

(Left)

• This unit has several distinctive advantages. The *automatic vacuum control* saves over two thirds of the electric current. This one advantage makes the most popular machine we have ever designed. Over a thousand are in use!

Vacuum contact may be had in two to three seconds. And there are no hooks, clamps or fastenings. The new "quartz crystal" glass *permits 25% faster exposure*. Motor and pump are built into one integral unit, the metal base of which is supported on a series of compression springs, eliminating all noise and vibration.

Entire mechanism operated from one central control panel. Nothing to get out of order.

*Made in Two Standard Sizes*

# WESEL MANUFACTURING CO. • SCRANTON, PA.

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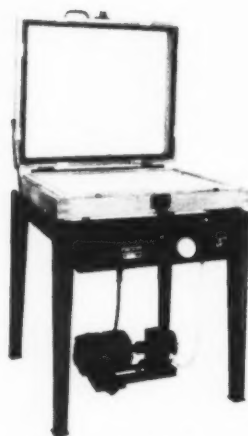
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# **"IDEAL" offers** **3 Vacuum Frames-** *for perfect printing*



*This IDEAL Frame can be used both ways—in vertical position with floor lamp, or in horizontal position with overhead lamp.*



*An auxiliary frame carefully developed to take care of small jobs, rush jobs and "overflows." Will stand up under hardest continuous use.*



*Made only in large sizes. Operator has ready access to all sides for leading and registering negatives on metal.*

*These standard types are fully described in our illustrated catalogue, copy of which will be forwarded upon request.*

*NOTE—Vacuum Tank and Automatic Switch can be furnished if desired with the above models.*

## **SWEIGARD IDEAL CO.**

**6122-6124 NO. 21st ST., PHILADELPHIA, PA.**

**Press Operating C**—A continuation of Press Operating B, giving attention to cleaning cylinders and bearers, to changing and cleaning side guides, to sewing and adjusting tapes, to setting the cylinder brush, to mixing colors for solids, to detecting and overcoming some of the simpler difficulties, to washing and testing the damping roller, etc. Open only to those with credit for Press Operating B. Tuition \$15.00. Instructor to be announced.

**Press Operating D**—A continuation of Press Operating C, giving consideration to placing guide marks on the plate, marking the cylinder, mixing the colors, (light blue, opaque orange, and black), making the necessary adjustments to secure an OK, etc. Open only to those with credit for Press Operating C. Tuition \$15.00. Instructor to be announced.

**Press Operating E**—A continuation of Press Operating D, placing emphasis upon mixing covering colors, setting impression cylinder and delivery grippers, preparing the plate for the press, operating the press, etc. Open only to those with credit for Press Operating D or the equivalent. Tuition \$15.00. Instructor to be announced.

**Press Operating F**—A continuation of Press Operating E, stressing practice in operating the press for different types of jobs. Open only to those who have credit for Press Operating E or the equivalent. Tuition \$15.00. Instructor to be announced.

**Press Operating G-H-I**—(3d year Apprentices)—A continuation of Press Operating F, giving attention to operating problems not previously considered and providing ample opportunity for operating the press under conditions common to lithographing plants. Many of the numerous production difficulties are treated so that the student learns not only to remedy undesirable conditions but also to prevent their development. Open only to those with credit for Press Operating F or its equivalent. Tuition \$15.00 for each ten weekly sessions. Instructor to be announced.

**Press Operating J**—A practical course for journeymen concerned with the technical and semi-technical features of press operating. Emphasis is placed upon preventives as contrasted with corrective measures. Open only to candidates whose qualifications are approved. Tuition \$15.00.

**Stripping A**—A course in which the various operations commonly performed by strippers in lithographing plants are given practical consideration. Each student is provided with the necessary materials and equipment for real work and is required to perform representative pieces of work. Layout and imposition work is included. Tuition \$15.00. Instructor to be announced.

**THE PHOTO-LITHOGRAPHER**

# IN STEP WITH THE TIMES

## THE CLEVELAND MODEL "DOUBLE O" FOLDER

Sheet Size from  
4"x5" to 22"x28"



**GREATER** Speed  
**HIGHER** Productive Time  
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THE ***Fastest***  
**FOLDING MACHINE EVER BUILT**

Millions of the sheets that are printed daily must be folded — *quickly, accurately, and in a great variety of folds.* Here's where Cleveland Folders fit in. They are "In Step" with the demands of the times — built in four sizes to meet practically every folding requirement.

**The Model "Double O" Cleveland Folder** folds the work from the thousands of job and job-cylinder presses in the full size sheet up to 22" x 28" and half size sheets from presses with size range up to 28" x 44".

**Its Speed.** The Model "Double O" because of two-speed mechanism, will fold all sheets on both parallel and right angle work at **Higher Average Speeds** than any other folder built.

**Its Folding Range.** The Model "Double O" with its three folding sections and three folding plates to each section gives a variety of folds beyond that of any folder of similar size. These 9 folding plates provide for folding signatures of 4 pages up to 64 pages in parallel, right angle and combinations of parallel and right angle folds.

Send for new descriptive circular "In Step With The Times"—It gives production figures on standard sizes of signatures and shows folding range of machine.



IT TAKES  
**COURAGE**  
TO MAKE A  
TACKLE

and it takes **COURAGE**  
to "pull down"

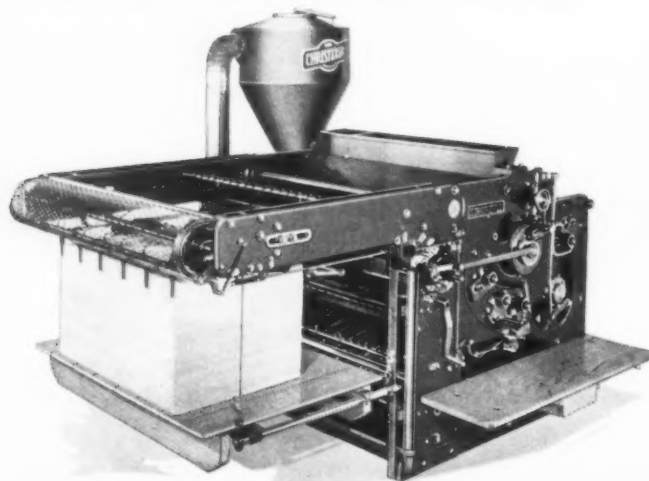
## **OBSOLETE EQUIPMENT**

You can't stand up against competitive attack with old machines, when the other fellow has equipment that can cut established costs in half.

The Christensen High-Speed Bronzer has produced sensational results—savings of from \$2000 to \$5000 per year—on practically every installation. Records, certified by the management and a disinterested engineering authority, are available to verify these statements, which cover all types of work in both large and small plants. *Equipment which can not match these results is obsolete.*

If you would like to compare your cost and quality with the standards of this high-production machine, we will be happy to send you the detailed reports without obligation. THE CHRISTENSEN MACHINE COMPANY, 100 FOURTH STREET, RACINE, WISCONSIN.

## **CHRISTENSEN HIGH-SPEED BRONZER**



## **THINK BEFORE YOU**

By H. A. PAUL

**I**N America, we inherit the Yankee delight in shrewd bargaining, along with the Anglo-Saxon love for square-dealing. Very often the former has gotten the better of the latter. We plead for the return of fair-play and logic to sound business practice. Only in this way can the ever-tightening strangle-hold of costly unemployment, and the ever-increasing tax burden be broken.

If, in the following paragraphs, we seem to use strong language, please bear in mind that we do so more to dissuade the reader from yielding to the temptation than to condemn those who have yielded. In the event that you have wielded the bludgeon to batter down price-resistance or if you have been guilty of pricing below the level of honest profit, you have more reason to pity yourself than we have to censure you.

During these hectic days, there seems at least to be one point upon which our government, legislative and executive, and our business structure, capital and labor, all agree: If we are to be relieved of the costly relief burden, if we are to provide gainful occupation for the unemployed, if we are to avoid an immediate recurrent depression—it is absolutely necessary that something like the normal price-levels yielding normal profits be restored.

Nevertheless, despite the fact that the seething political-industrial pot has boiled down to this one agreement, many persons in both groups are still heading in the opposite direction—wallowing deeper and deeper into the bottomless morass of under-bidding and under-selling. So long as we as individuals continue in this direction, the nation as a whole will suffer; times will again get worse. When individually we do an about-face to normalcy, collective prosperity will return.

Every time an individual or concern temporarily benefits by a less-than-cost price on some commodity or service purchased, the country at large receives a setback. For each individual or concern that thus profits, many individuals and concerns suffer. Business firms lose their stability; men are forced out of work; and your unemployment problem becomes more costly with resulting high taxes to pay the bill. Crime is rampant and anti-social tendencies grow. This is the geared-up increased-destruction ratio of price-cutting when practiced on a national scale. Multiply any one instance by hundred-thousands duplicated daily and you have the picture of your own action; the very foundation of our economic structure is under attack.

We are not concerned so much with the unscrupulous buyer, the bargain bully, the peacetime profiteer who

**THE PHOTO-LITHOGRAPHER**



## KILL THE PROFIT

uses his money-power to force the purchase price below cost; or with the cringing seller who will ignominiously stoop to any level to get an order. These undesirables are the small minority, and soon pass out of the picture, victims of their own shady practices.

What concerns us most are the buyers who, drunk with bargaining power, are unknowingly wreaking misery on their fellow men by their thoughtless activities, and the common price-slasher who decides he is smarter and operates his plant more efficiently than anyone else, but does not know his costs, nor makes any effort to provide himself with knowledge of his costs. These two elements have been the deterrent factors in our return to full re-employment and normal prosperity.

You must bear in mind that to function as a business you are both buyer and seller. You buy the labor necessary to perform the service needed to move your product; you buy the materials and supplies that are necessary to perform the service or prepare the product you hope to sell. Then you become the seller of your product or service. Therefore, your intelligence and fair dealing in buying the items you need to make a saleable product or service is just as important to the welfare and prosperity of the business structure of our country as it is for you to know your costs on the completed product or service and sell it on the basis of a sound profit in order to enable you to insure permanent employment to your employees at a decent wage scale.

The lack of an adequate profit caused by lack of cost knowledge together with human greed for volume business running rampant has been the cause of many of our labor difficulties during the past year. With fixed expenses mounting to unheard of heights in the ordinary conduct of business, it is high time that American businesses, large or small, take stock of their buying and selling tactics; otherwise our profit system may be entirely destroyed by our own actions.

If by the common, oft-repeated threat, "The lowest price gets the job," you or any other buyers force the price blindly down below the honest profit to which the producer is entitled, or you as the seller yield to such unworthy demands, you are surely, if unintentionally, lowering the standard of living for others, as well as for yourself. When the lowest price gets the job, without regard to cost or consequences, the income of every man in a specific industry is jeopardized; purchasing power is curtailed; credit is tightened. If you are a price-cutter, you are destroying the confidence and capital which provide gainful and decent employment for those who are

SEPTEMBER 1937

## Supreme Arc Lighting Efficiency...

*The*  
**35**  
*Amperé*  
**HELI-O-LITE"**

for both  
CAMERA WORK  
AND  
PRINTING FRAME USE



Here is the *Highest Quality* Open Flame Photographic Arc Lamp in the low priced field. It is only one model of a full range of Pease "Heli-O-Lite" Arc Lamps available in a variety of styles and amperage capacities for every lighting requirement in connection with either Camera Work or Printing Frame use.

Write today for a copy of the Pease 40 page Arc Lamp Catalog and learn exactly how Pease "Heli-O-Lites" can serve you with unusual satisfaction and with lowest possible operating costs.

**THE C. F. PEASE COMPANY**  
2601 West Irving Park, Chicago, Ill.

**"HELI-O-LITE"**

WHITE FLAME

OPEN ARC LAMPS

striving valorously to retain their self-respect and good citizenship; in short, you are a public enemy.

The misuse of buying power to encourage, force, or even permit pricing below cost, must in the end destroy the very income of the individual who abuses that power—so dependent is the welfare of one industry upon that of another.

Of course, it goes without saying that prices should be honest, based on actual cost plus a sound profit. In arriving at a true cost, it must not be overlooked that many forms of taxes, Federal, state and local do affect your costs directly, and they must be taken into account in arriving at a complete cost of your service or product.

Every item of expense or tax which must be paid, whether you make a profit or not, is certainly a legitimate item of cost, which must be given due consideration, applied to your cost and equitably distributed to your cost centers. There is a danger line below which the price gauge must not sink, if the business ship of state is to stay afloat.

Our plea is that the purchase be made at the right price, rather than the lowest price; and the right price is very easily determined. While few prices are completely standardized, the modern manufacturer today knows his costs as accurately in one industry as in another, and dependable manufacturers (the only ones with whom you should deal) are usually unhesitant in laying down their costs to their customers.

When you are asked for an estimate, make it plain that you want a reasonable profit, but that at the same time you expect the buyer to receive a fair price based on accurate costs. Such an expression of frankness may startle him, but you will certainly get a price that is right; and what is better, you will have gone a long way toward reestablishing lasting prosperity.

But we all agree it is the seller as much as the buyer who is responsible for the deplorable price situation which is deterring the revitalization of industry.

If you, as a member of this group, have cut your prices to the bleeding point in order to get your assumed share of the business even at a loss, you have invited commercial suicide. He who lowers his prices below the level of logic and sanity must invariably seek self-preservation by forcing every one from whom he buys to come down likewise. That is the damnable part of this vicious circle of price-cutting. One individual or firm cannot force its own prices below a fair profit without forcing every other line of industry with which it is allied, to do the same.

If you know your costs, you will know exactly what profit you must have to live and let live. Insist on your rights as an honest member of an honored craft. People will respect you for it and will reward you by giving you a share of their business. This is the inevitable action that you, we, and everybody else in the world of business must take if normal conditions are to come back, and be retained. It must be done as promptly as possible.

**NEW!!**

## **AQUATEX**

1. Gives an absolute even distribution of water.
2. Throws no fuzz or lint.
3. Has uniform thickness, will not vary in strength under working conditions.
4. Stays in position, will not creep.
5. May be washed on or off the rollers.



Roller makers for seventy years . . . Lithographic - composition - newspaper - varnish - lacquering . . .

Every kind of good roller required for good printing and lithographing

**NEW!!**

## **AQUATEX**

(PATENT APPLIED FOR)

*for water distribution*

**The new improved seamless tubing for lithographic and off-set dampening rollers.**

Information and samples supplied upon request. Developed for and guaranteed by

**GODFREY ROLLER COMPANY**

211-15 NORTH CAMAC STREET, PHILADELPHIA, PENNA.

WILLIAM P. SQUIBB, President

**NEW!!**

## **AQUATEX**

1. Applied by pulling over the roller base and fastening the ends.
2. No sewing—no stitching. The cover can be installed in three minutes; is pulled on like a stocking.
3. Has worked successfully in numerous plants. Average life per roller doubled.

## Double Tone Paper Provides Self-Screen

The accompanying illustration is one of several examples of Doubletone drawings included with a sample kit offered by Craftint Manufacturing Company.



*Craftint Illustration by Nancee Head*

Doubletone is a drawing paper with two invisible screens which are brought out when liquid developers are applied with pen or brush. Doubletone saves a great deal of time and money on drawings which would otherwise have to be screened and the quality of the work produced by this method is remarkably fine.

SEPTEMBER 1937



Wide latitude, fine color sensitivity, sharp resolution, sparkling contrast—these 4 new materials by Defender give you the utmost in negative quality. All four are orthochromatic. Each fills a particular need in offset printing and lithography.

- 1 **DEFENDER LITHO FILM** *Orthochromatic—Non Halation*—Equally satisfactory for line or halftone, from black-and-white or colored copy.
- 2 **DEFENDER LITHO FILM (CLEAR BASE)** *Orthochromatic*—Same emulsion as above on transparent base, for direct lithography, deep-etch, or in photo engraving in place of wet plate.
- 3 **DEFENDER LITHO NEGATIVE PAPER** *Orthochromatic*—For making economical line and halftone negatives. Has wide color sensitivity and extreme contrast.
- 4 **DEFENDER LITHO STRIP FILM** *Orthochromatic*—For combination line and halftone negatives. Sharp dots. Provides for correct reproduction of most colored line copy without filter intervention.

*Write* for detailed information and free trial package of any of these Defender negative materials.



**DEFENDER PHOTO SUPPLY CO., INC., ROCHESTER, N. Y.**



## NO SALESMAN IS A BORE

ALL four of them were "big names" in business. Two were general managers, one was a president and the fourth was vice president and treasurer. Those were their official titles, the writing on their medals saying "conspicuous service in business."

But all four had one thing in common. They had been sales managers, and they always would be sales managers.

When we dropped our simple-sounding question in their midst, they slowly took the fat cigars from their mouths, looked vague a moment, and then smiled at each other. All we had asked was, "What is a salesman?"

"A salesman is an actor," said the first one to recover. The others nodded their heads in tentative agreement. "He not only appears to become, but actually does become the equal, the companion, almost the replica of the man he is trying to sell. He feels what that man feels; he thinks about money and values and services what that man thinks; he—well, he's an actor!"

"He's a missionary, too," said the next man. "He is so thoroughly convinced that what he has to sell is the very thing his prospect needs that he gets a sort of crusading reaction when he enters the prospect's office. He feels that he must show the man the light. When he makes a sale, he feels, not triumphant, but content that he has done a good deed. Yes, he's a sort of missionary."

"He's a student, though," added the third. "I mean, the good salesman knows his own business, but doesn't stop there. He knows all business, general business, and, most importantly, the business of the man he is trying to sell. He knows, and so can show clearly in the prospect's own terms, why that man should have his product. That requires study. A salesman is a student."

There was another pause. The three who had spoken turned toward the fourth, who had acquired a reputation of many years' standing as having knit together one of the finest sales forces ever organized. He had listened, and nodded in agreement as each of his confreres had spoken.

"All that is perfectly true," he said, after a while. His hearers smiled. They knew that approach. Agree with your prospect and then amplify his thought so that in the end you are correcting him. Page four stuff.

"But I think you can boil it down to this: A salesman is a living man. He has no dead-wood. He can't have. You all know that the three prime requisites of the salesman are Expression, Personality and Judgment.

"Take Personality. It means genuine interest in everyone, from the cop on the corner to the Chief Justice of the Supreme Court. The true salesman really wants to know about everyone, what he eats, what he plays, how his kids are coming along and what he did with his bonus. Because

he wants to know, he finds out. And because he finds out, each prospect is his confidant, his friend. The prospect tells him his business troubles, and his business triumphs. And the salesman makes the sale.

"Personality means interest in things; left-hand threads, colored ink, the material in the Statue of Liberty, the callouses on his prospect's hands. And because he is genuinely interested in things, he and his prospect have much in common. It is not far from having something in common with a prospect to having his signature on a contract.

"Personality means a vital interest in ideas; the intangibles of ethics, social changes, the monetary trend, philosophy. The salesman has that, reflects it, finds the same spark in his prospect. That spark starts a flame, if properly tended, that burns down sales resistance.

"You are all agreed, I think?" He looked around.

Again that exchange of smiles. Those three veterans knew that one, too. The speaker was trying to sell his definition of a salesman, and one of the first steps is to arrive at some sort of agreement with the prospect. But they waved him on. Of course they agreed.

"Personality means that the man is human, a pleasant, friendly, likeable person. By that I mean that his honest instinct is to be helpful. It means that he has a huge and unflagging enthusiasm, an eager enthusiasm that is as spontaneous as a bleacherite's boo and as catching as a mid-summer cold. Hitch those two together and your salesman will shortly be translating his enthusiasm into helping the prospect solve his problems—with the name on the dotted line.

"Judgement, in the last analysis, is common sense. Which means that the salesman won't try to sell a cellophane bathing suit to an Eskimo for use in the Arctic Circle. What he'll do is sell the Eskimo a trip to Southern California, and, incidentally, the cellophane bathing suit.

"Expression is merely the ability to say coherently, intelligibly and interestingly those things which the salesman wants to impart to his prospect. And it also means to show it in his appearance, the "front" that so many people sneer at. A neat man is a self-respecting man, and a self-respecting man commands respect.

"You add up that rather imposing list and you'll see it boils down to a very simple formula: An interesting, interested, friendly, sensible, well-informed man is a salesman."

"That's right," the first speaker said. "And it's too bad that the average working salesman doesn't realize how simple it is to acquire those three things. Personality,

*(Continued on page 121)*

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Your profits are "timed" on every job. A Miehle Unit-Type Offset Press makes every hour worth more dollars to you.

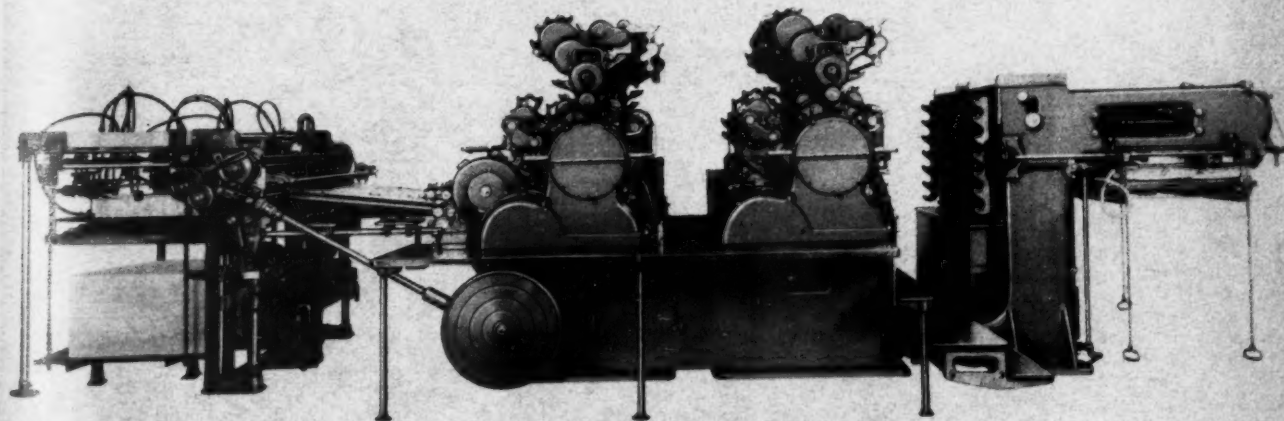
**TIME SAVED in settings** — adjustments are few and simple on a Miehle . . . quickly and easily made by any competent pressman.

**TIME SAVED by ample working space** — real elbow room between units allows the operator to work swiftly in perfect safety.

**TIME SAVED means high average production** — ease of operation and steady running efficiency of a Miehle Unit-Type Offset Press, insure continuous volume and increased profits.

Size No.	Maximum Sheet	Speed at Register
69	46½ x 67½	4100
57	41½ x 55½	4500

Motored by KIMBLE



MIEHLE No. 57 TWO COLOR UNIT-TYPE OFFSET PRESS

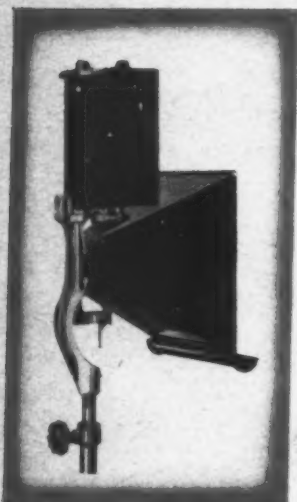
**MIEHLE PRINTING PRESS & MFG. CO.**  
CHICAGO NEW YORK

HARRY W. BRINTNALL CO.  
San Francisco Los Angeles Seattle

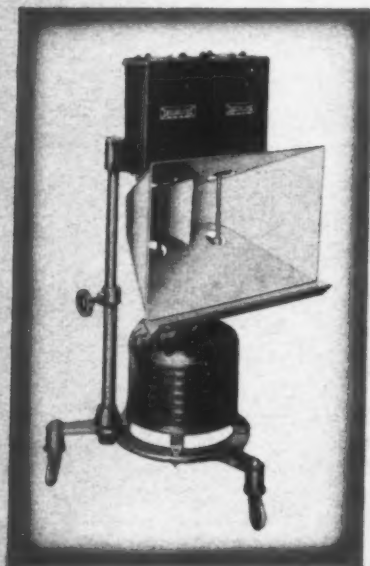
LITHOGRAPH IT ON A MIEHLE

# Solar-Lite

## Camera and Printing Arc Lamps



Type SRK Solar-Lite Camera Lamps are compact, economical in use of carbon, easily adjusted. Free moving tripods fit the smallest spaces around camera. Made for 25-35-45-60 Amps.; series 220 volts or multiple 110 volts. Type SRK Single Flame Printer on a lower tripod for regular size frames is made for 35-45-60 Amps. 220 or 110 volts on request.



Type SRK-DX, a complete and compact unit, covers large printing frames from "corner to corner" uniformly. Arc flames 12 inches apart. Made for 35-45-60 amps. 220 volts—110 volts on request. Normal heights 27 to 44 inches. Higher telescoping pipes can be furnished for 37 to 54 inches for higher printing frames.

**A**FTER 25 years, Solar-Lites are still the accepted standard of light accuracy in the lithographic industry. Their rugged, dependable structure continues to earn for them a conspicuous position among graphic arts craftsmen everywhere. The exclusive "floating arc" mechanism, magnet coil, resistance and choke coil accuracy and added "pep" are Solar-Lite features fully recognized by many hundreds of users. To reduce current consumption we recommend specially designed Solar-Lite choke coils for A. C. 60 cycles; other frequencies to order. Capacities, 15-25-35-45-60 amps for two lamps in series and for one lamp in multiple on 208 to 240 volts.

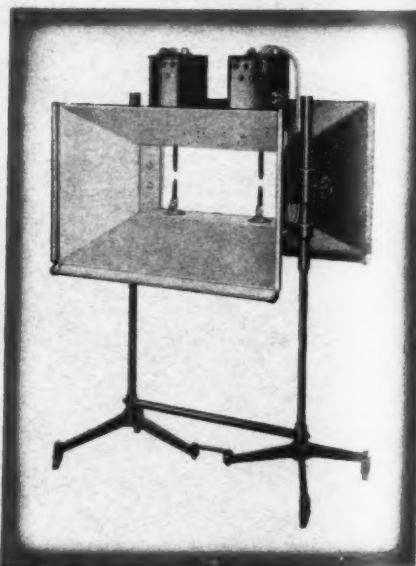
*Write for Bulletin*  
**ATLAS ELECTRIC DEVICES CO.**

**389 West Superior Street**

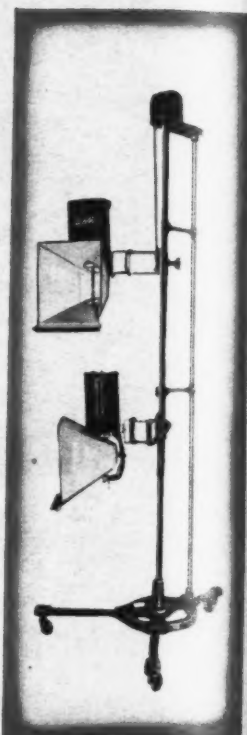
**Chicago**



Type HCU Horizontal Composing Unit is a source of operating ease and profit. Loading and printing are horizontal. The type ATL Solar-Lite is free from gears and racks and the use of non-rusting materials prevents friction. Timer, magnet switch, push button, motor switch, release valve and vacuum gauge beneath operator's hands. Made for 50-60-75 amps., 220 volts and 110 volts if desired.



Type SRK-W Twin Arc, Two Face Solar-Lite Printer will serve two printing frames at once and is simple, compact and sturdy. It is easily trimmed and has a 36 x 22 inch reflector of improved three piece design. Made for 35-45-60 amps., two in series 220 volts or 110 volts multiple on request.









# Equipment Review Supplement

## SEPTEMBER, 1937

IN the pages that follow THE PHOTO-LITHOGRAPHER takes pleasure in presenting a pictorial story of the latest achievements of the lithographic equipment industry, covering the full range of equipment currently offered for sale to the lithographer. In offering this presentation, this publication has three aims in view:

(1) To furnish a reliable equipment reference guide for the industry; (2) To stimulate the business of those represented in these pages; and (3) To safeguard potential buyers of lithographic equipment against the exaggerated and unsubstantiated claims of some who would ensnare the unwary.

Unpleasant as the subject may be THE PHOTO-LITHOGRAPHER again deems it timely to call the industry's attention to the unwarranted claims of some equipment makers and to the repeated spotlighting of this situation in the columns of this publication. Our readers will recall the excerpts from sales literature we have republished in these columns. We refer to such statements as:

(1) "Ganged two up this press will produce the first 100 copies on 20 lb. white sulphite bond for about \$1.00;" (2) "Operators change plates in about 10 seconds; change jobs in less than a minute; average 150 jobs per day and sometimes handle as many as 250 jobs in one day;" (3) "Buy your plates from a local photo-engraver."

THE PHOTO-LITHOGRAPHER intends to continue checking wild statements and bring them to the attention of both their sponsors and the members of this industry. It is our sincere conviction that many undesirable and unqualified concerns have been brought into this field as the result of exaggerated claims for equipment.

No one can advise a concern as to what kind or size equipment it should buy without knowing a great deal about the kind and volume of business to be produced. The equipment shown in the pages following is being used in many lithographic plants. We will be glad to give any member of the Association specific information on purchases planned.

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# Offset Press

Revised to

## HARRIS

Press Designation	Sheet Size Limits	Maximum Size Print	Minimum Gripper Margin	Plate Dimensions	Plate Thickness	Cut of Plate Cyl.	Blanket Dimensions	Blanket Thickness	Cut of Blanket Cyl.	Speed Range	Feeder	Feeder Capty.
17x22 Harris LSB—Single Color	8½x11 to 17½x22½	17½x22½	5-16"	19¾x23	.010" to .012"	.015"	23¾x23	.062" to .065"	.075"	Up to 7000	Harris Auto. Suction Pile	20"
21x28 Harris LSN—Single Color	10x14 to 21x28	21½x29	5-16"	24¾x30	.012"	.015"	26½x30	.062" to .065"	.075"	Up to 6000	Harris Auto. Suction Pile	21"
22x34 Harris EL—Single Color	10x14 to 23x36	22½x35	5-16"	25½x36	.012"	.015"	29¼x36	.062" to .065"	.075"	Up to 5500	Harris Auto. Suction Pile	42"
26x40 Harris LSQ—1-Color LSR—2-Color	17x22 to 26x40	25½x40½	5-16"	32½x41"	.012"	.015"	37x41½	.062" to .065"	.075"	Up to 5500	Harris Auto. Suction Pile (Stream Feed)	42"
35x45 Harris LSS—1-Color LST—2-Color	17x22 to 35x45	34¾x45	5-16"	39x46	.014"	.020"	45½x46½	.062" to .065"	.075"	Up to 5000	Harris Auto. Suction Pile (Stream Feed)	42"
41x54 Harris LSW—1-Color LSX—2-Color LSY—3-Color LSZ—4-Color	22x34 to 41x54	40½x53½	5-16"	45½x54	.014"	.020"	54¼x54½	.062" to .065"	.075"	Up to 5000	Harris Auto. Suction Pile (Stream Feed)	42"
42x58 Harris LSJ—1-Color LSK—2-Color LSI—3-Color LSM—4-Color	22x34 to 42x58	42x59	5-16"	47¼x59	.014"	.020"	52¼x59½	.062" to .065"	.075"	Up to 5000	Harris Auto. Suction Pile (Stream Feed)	42"
46½x68½ Harris LSF—1-Color LSG—2-Color LSH—3-Color LSG—4-Color	25x38 to 46½x68½	46½x68	5-16"	49½x68½	To Customer's Specifications		57x68½	.062" to .065"	.075"	Up to 4500	Harris Auto. Suction Pile (Stream Feed)	49"
<b>HOE</b>												
30x42" Hoe Single Color Super-Offset Press	17x22 to 32x43	29¾x42¾	5-16"	34x43	As specified by purchaser		42x43½	As specified by purchaser		Up to 5000	Dexter	37"
41x54" Hoe Single Color Super-Offset Press	19x25 to 42x55½	41½x55	5-16"	45½x55¼	As specified by purchaser		54x55½	As specified by purchaser		Up to 4500	Dexter	43"
41x54" Hoe Two-Color Super Offset Press	19x25 to 42x55½	41½x55	5-16"	45½x55¼	As specified by purchaser		54x55½	As specified by purchaser		Up to 4000	Dexter	43"
<b>MIEHLE</b>												
Miehle Offset No. 57	19x25 to 41½x55½	41x55	¾"	45x57	.020"	.020"	47x57	.062" to .063"	.080"	Up to 4500	Dexter	44"
Miehle Offset No. 69	24x34 to 46½x67½	46x67	¾"	50x68	.020"	.020"	51x68	.062" to .063"	.080"	Up to 4100	Dexter	44"
<b>RUTHERFORD</b>												
20x26"	20x26	19½x25	¼"	22½x27	.012"	.012"	27x25	.062"	.075"	Up to 6000 close register 5000	Rutherford Suction Pile	32"
Rutherford 20x29"	20x29	19½x28	¼"	22½x30	.012"	.012"	30x25	.062"	.075"	Up to 6000 Close register 5000	Rutherford Suction Pile	32"
<b>WEBENDORFER</b>												
12x18"	5x8 to 12¾x18	12¾x18	3-16"	15¼x17¾	.012"	.015"	18¼x16¼	3 Ply	.071"		Webendorfer Vacuum Air	18"
Webendorfer 17x22 Mac	8x10 to 17½x22½	17x22	3-16"	19¾x22½	.012"	.015"	22½x21½	3 Ply	.071"		Webendorfer Vacuum Air	18"
Webendorfer 22x26" S	11x17 to 22x26	21x26	3-16"	26¼x24¼	.012"	.015"	26x26	3 Ply	.071"		Webendorfer Vacuum Air	23"
Webendorfer 22x29"	21x28	22x29	5-16"	24¼x28½	.012"	.015"	26x28¾	3 Ply	.071"		Webendorfer Vacuum Air	23"
<b>WILLARD</b>												
22x30"	11x17 to 22x30	22x29	5-32"	24¼x30	.012"	.017" or optional	26x30	.062"	.075"	Up to 6500 close regis- ter 5400	Reloading Suction Pile	40"



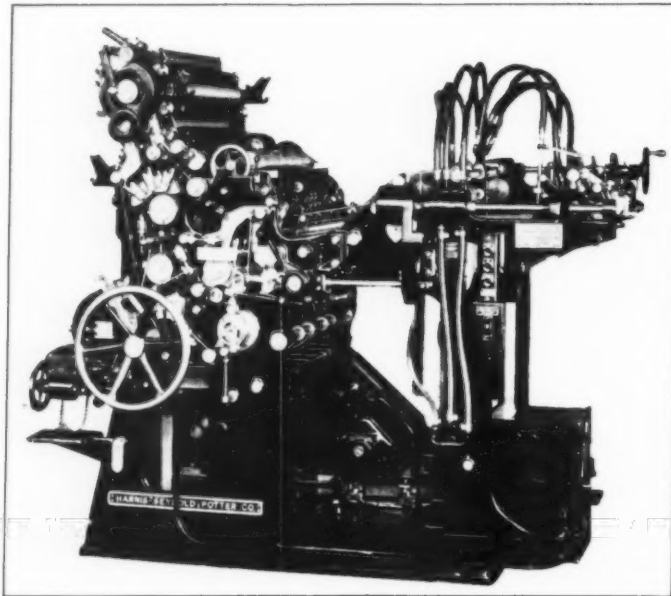
# Specification Chart

September 1, 1937.

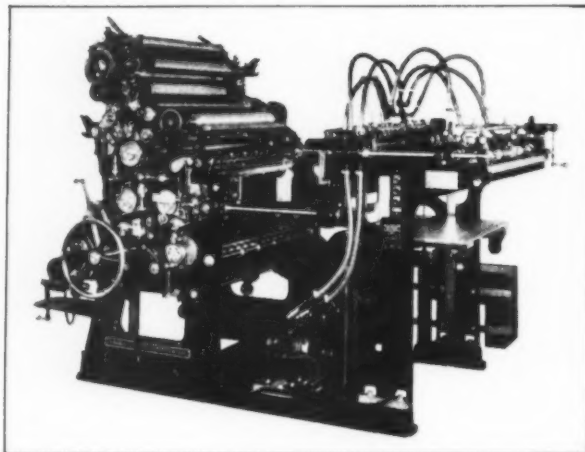
Delivery	Delivery Capacity	Number and Sizes of Covered Inking Rollers	Number and Size of Covered Dampeners	Approximate Weight	Approximate Floor Space	Electrical Specifications
Ext. Pile	18"	3 Form 2 9-16" 5 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 2 1/4" 1 Ductor 2 1/4"	4700 lbs.	4-1'x6-7"	Press: 3 H. P. variable speed motor. Feeder: 1/2 H. P. constant speed motor.
Ext. Pile	16"	3 Form 2 9-16" 5 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 2 1/4" 1 Ductor 2 1/4"	9800 lbs.	5-6'x8-8"	Press: 3 H. P. variable speed motor. Feeder: 1 H. P. constant speed motor.
Ext. Pile	20"	4 Form 2 9-16" 6 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 3 1-16" 1 Ductor 3 1-16"	10100 lbs.	7-1'x10-7"	Press: 3 H. P. variable speed motor. Feeder: 1 H. P. constant speed motor.
Ext. Pile	44"	(For each color) 4 Form 3 1/2" 9 Distrs. 3" 1 Ductor 3"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 28000 lbs. 2-col. 40000 lbs.	10-7'x18-11" 11-6'x23-0"	Feeder: 2 H. P. constant speed motor. Press: 7 1/2 H. P. variable speed motor. Press: 10 H. P. variable speed motor.
Ext. Pile	44"	(For each color) 4 Form 3 1/2" 9 Distrs. 4" 1 Ductor 4"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 23000 lbs. 2-col. 35700 lbs.	1-col. 9-11'x21-2" 2-col. 10-5'x25-9"	Press: 1-col. 7 1/2 H. P.; 2-col. 10 H. P.; variable speed motor. Feeder: 2 H. P. constant speed motor.
Ext. Pile	44"	(For each color) 4 Form 4 1/2" 9 Distrs. 4" 1 Ductor 4"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 32500 lbs. 2-col. 54000 lbs. 3-col. 75000 lbs. 4-col. 95000 lbs.	1-col. 11-7'x23-6" 2-col. 13-8'x27-7" 3-col. 13-8'x29-9" 4-col. 13-8'x33-7"	Press: 1-col. 10 H. P.; 2-col. 15 H. P.; 3-col. 15 H. P.; 4-col. 20 H. P., variable speed motor. Feeder: 2 H. P. constant speed motor.
Ext. Pile	44"	(For each color) 4 Form 4 1/2" 9 Distrs. 4" 1 Ductor 4"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 34000 lbs. 2-col. 57000 lbs. 3-col. 80000 lbs. 4-col. 98000 lbs.	1-col. 12-4'x23-7" 2-col. 14-0'x27-7" 3-col. 14-6'x30-6" 4-col. 14-6'x34-0"	Press: 1-col. 10 H. P.; 2-col. 15 H. P.; 3-col. 15 H. P.; 4-col. 20 H. P., variable speed motor. Feeder: 3 H. P. constant speed motor. Delivery: 2 H. P. constant speed motor.
Ext. Pile	49"	(For each color) 4 Form 3 3/4" 7 Distrs. 3 1/2" 1 Ductor 3 1/2"	(For each color) 2 Dampeners 3 9-16" 1 Ductor 3 9-16"	1-col. 45000 lbs. 2-col. 72000 lbs. 3-col. 98000 lbs. 4-col. 125000 lbs.	1-col. 13-1'x25-8" 2-col. 14-4'x31-7" 3-col. 14-4'x36-8" 4-col. 14-4'x41-9"	Press: 1-col. 10 H. P.; 2-col. 15 H. P.; 3-col. 20 H. P.; 4-col. 25 H. P., variable speed motor. Feeder: 3 H. P. constant speed motor. Delivery: 2 H. P. constant speed motor.
Ext. Pile	38"	4 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	24000 lbs.	19-7'x9-3"	7 1/2 H. P. variable speed control.
Ext. Pile	43"	5 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	36500 lbs.	22-10'x11-3"	7 1/2 H. P. variable speed control.
Ext. Pile	43"	(For each color) 5 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	(For each color) 2 Form 3 1/2" 1 Ductor 3 1/2"	69500 lbs.	27-7'x13-0"	10 H. P. variable speed control.
Pile	44"	4 Form 3 1/2" 4 Form Riders 3 1/2" 3 Drum 2 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	1-col. 31000 lbs. 2-col. 54000 lbs. 3-col. 77000 lbs. 4-col. 100000 lbs.	1-col. 22-7'x12-6" 2-col. 27-9'x12-6" 3-col. 32-11'x12-6" 4-col. 38-1'x12-6"	1-col. 10 H. P. 2-col. 20 H. P. 3-col. 30 H. P. 4-col. 40 H. P.
Pile	44"	4 Form 3 1/2" 4 Distributors 3 1/2" 3 Drum 2 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	1-col. 37000 lbs. 2-col. 65000 lbs. 3-col. 102000 lbs. 4-col. 134000 lbs.	1-col. 25-4'x13-5" 2-col. 31-4'x13-5" 3-col. 37-4'x13-5" 4-col. 43-4'x13-5"	1-col. 10 H. P. 2-col. 20 H. P. 3-col. 30 H. P. 4-col. 40 H. P.
Receding Auto Pile	18"	3 Form 2 1/2" 7 Distributing 2 1/2" 1 Distributing 2 1/2" 1 Ductor 2 1/2"	2-2 1/2" diam. Damp. 1-2 1/2" diam. Ductor	8800 lbs.	4-8'x9-6"	2 H. P. D. C. } Press 3 H. P. A. C. } 1 1/2 H. P. Feeder
Receding Auto Pile	18"	3 Form 2 1/2" 7 Distributing 2 1/2" 1 Distributing 2 1/2" 1 Ductor 2 1/2"	2-2 1/2" diam. Damp. 1-2 1/2" diam. Ductor	9300 lbs.	5-1'x9-6"	2 H. P. D. C. } Press 3 H. P. A. C. } 1 1/2 H. P. Feeder
	6"	2 Forms 2 1/2" 3 Distrs. 1 Ductor 1 Large Drum 3 Riders	2 Plate 2 1/2" 1 Ductor 2 1/2"	1500 lbs.	3-2'x4'	1/2 H. P.-1/2 H. P.
Chain Auto Pile	18"	3 Form 2 1/2" 8 Distrs. 2" 1 Ductor 2" 3 Drums	2 Plate 2 1/2" 1 Ductor 2 1/2"	3600 lbs.	3-9'x5-1"	1/2 H. P.-1 1/2 H. P. variable speed control.
Chain Auto Pile	23"	4 Form 2 1/2" 6 Distrs. 2" 1 Ductor 2" 3 Drums	2 Plate 2 1/2" 1 Ductor 2 1/2"	6000 lbs.	6'x6'	1 H. P.-2 H. P. variable speed control.
Chain Auto Pile	23"	4 Form 2 1/2" 6 Distrs. 2" 3 Drums 1 Ductor 2"	2 Plate 2 1/2" 1 Ductor 2 1/2"	6200 lbs.	6'x7'-5"	1 H. P.-2 H. P. variable speed control.
Receding Auto Pile 4 sets patented spring rollers	27"	4 Form 2 1/2" 1-7" Drum 3-3 1/2" Drums 5 Distributors 2 1/2" 1 Ink Ductor 2 1/2" 5 Riders	2 Plate 2 1/2" 1 Ductor 2 1/2"	7000 lbs.	5'x8'	3 H. P. Press. 1 H. P. Blower.

# OFFSET PRESSES

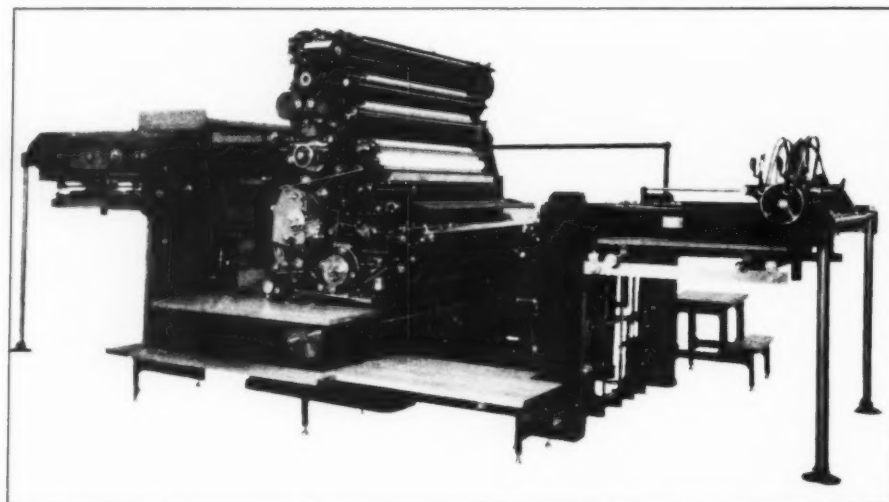
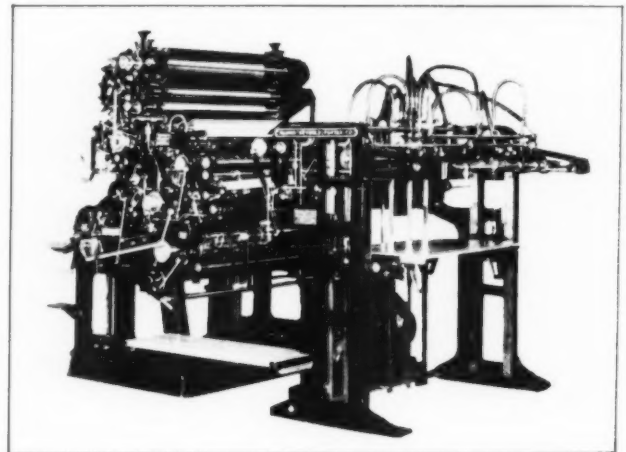
17½" x 22½"  
Single-Color Harris LSB  
Harris-Seybold-Potter Co.



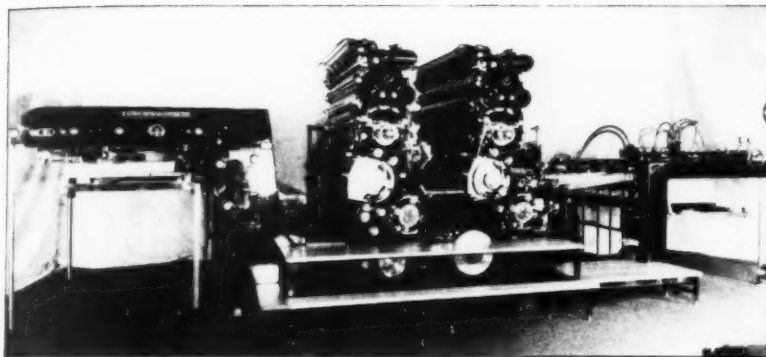
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21½" x 28"  
Single-color Harris LSN  
Harris-Seybold-Potter Co.



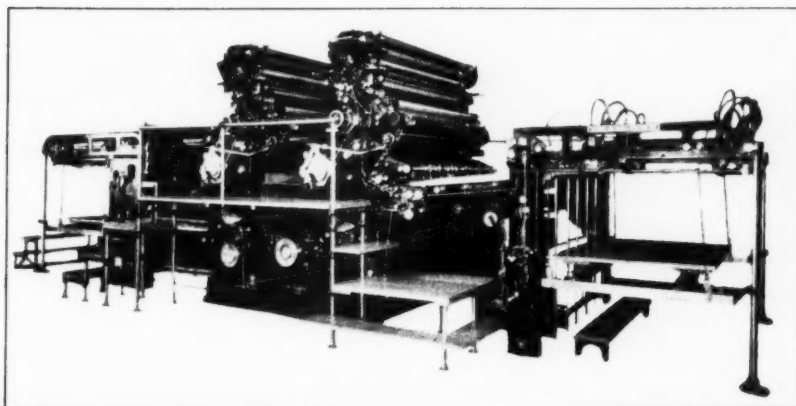
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22" x 34"  
Single-color Harris BL  
Harris-Seybold-Potter Co.



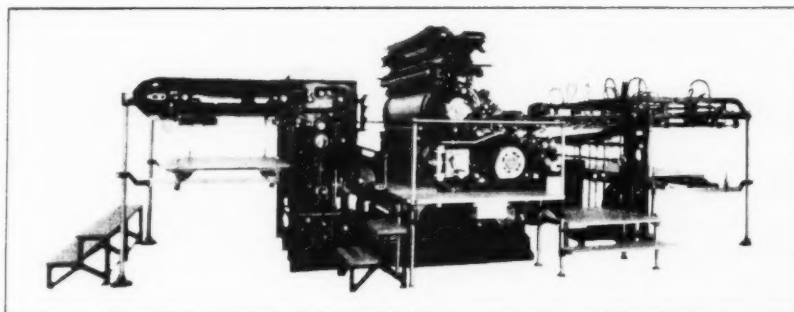
42" x 58"  
Single-color  
Harris LSJ  
Harris-Seybold-  
Potter Co.



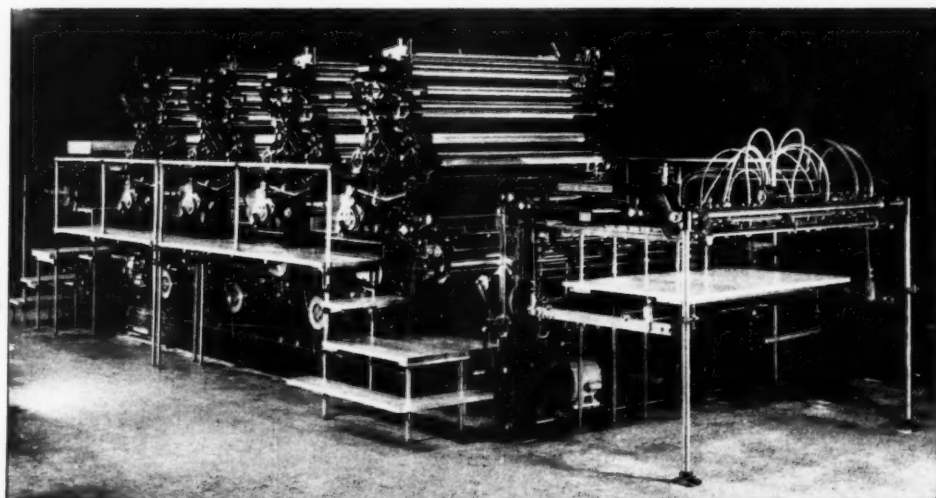
42" x 58"  
Two-color  
Harris LSK  
Harris-Seybold-Potter Co.



46½" x 68½"  
Two-color  
Harris LSG  
Harris-Seybold-Potter Co.

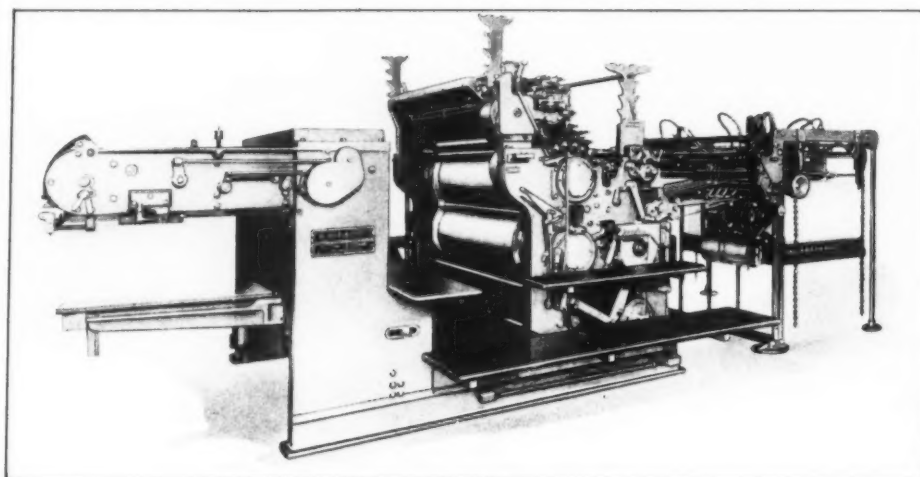


46½" x 68½"  
Single-color  
Harris LSF  
Harris-Seybold-Potter Co.

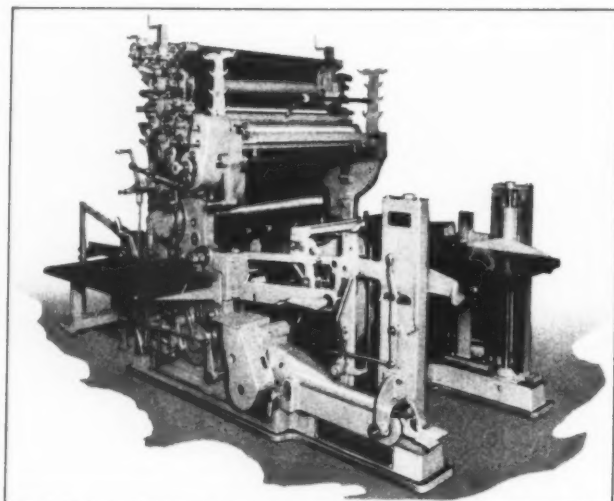


46½" x 68½"  
Four-color  
Harris LSH  
Harris-Seybold-Potter Co.

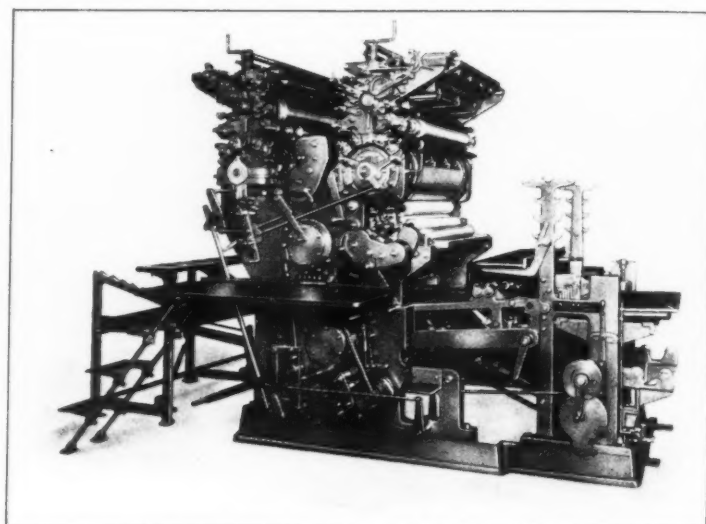




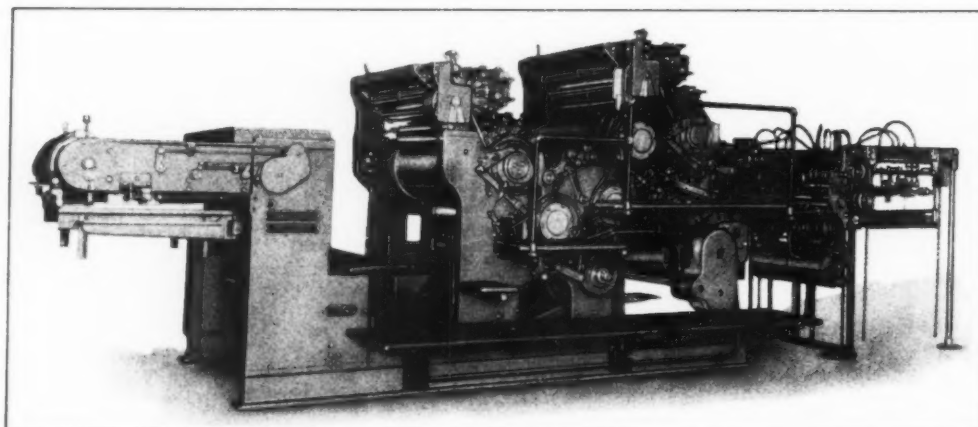
Hoe Single-color, 41" x 54"  
R. Hoe & Co., Inc.



Hoe Single-color Super-Offset Metal Decorating  
Press Arranged for Hand Feed, With Automatic  
Pile Elevator  
R. Hoe & Co., Inc.

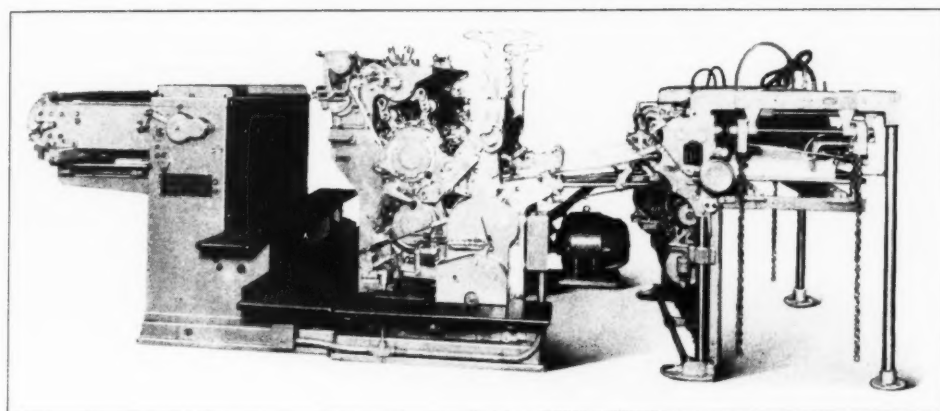
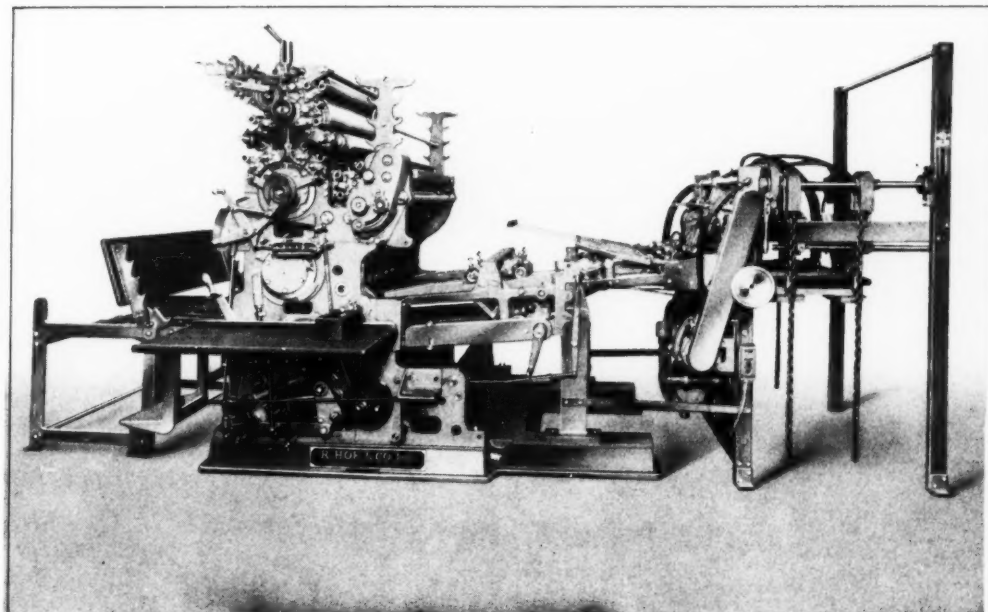


Hoe Two-color Super-Offset Metal  
Decorating Press, Hand Feed  
R. Hoe & Co., Inc.



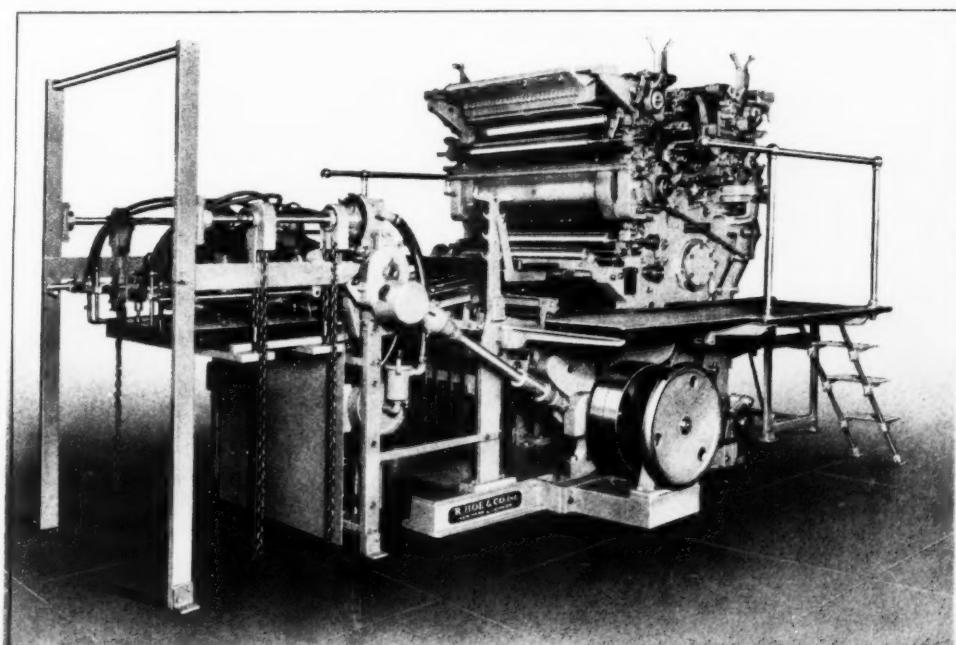
Hoe Two-color Super-Offset Press, 41"x54"  
R. Hoe & Co., Inc.

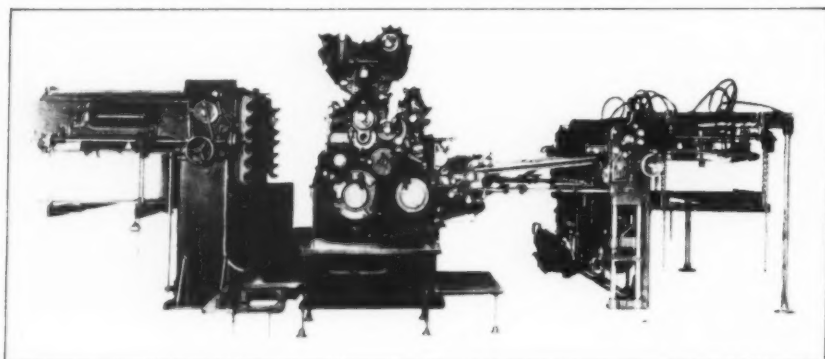
Hoe  
Single-color  
Super-Offset Metal  
Decorating Press  
With Automatic Feed  
R. Hoe & Co., Inc.



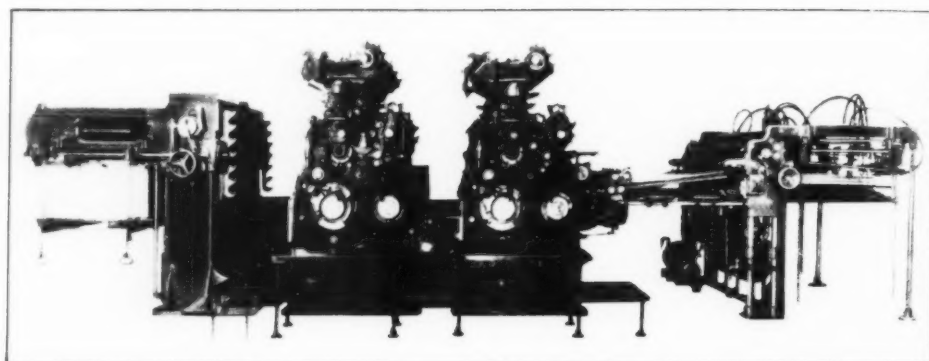
Hoe  
Single-Color  
30'' x 42''  
R. Hoe & Co., Inc.

Hoe  
Two-color  
Super-Offset Metal  
Decorating Press  
With Automatic Feed  
R. Hoe & Co., Inc.

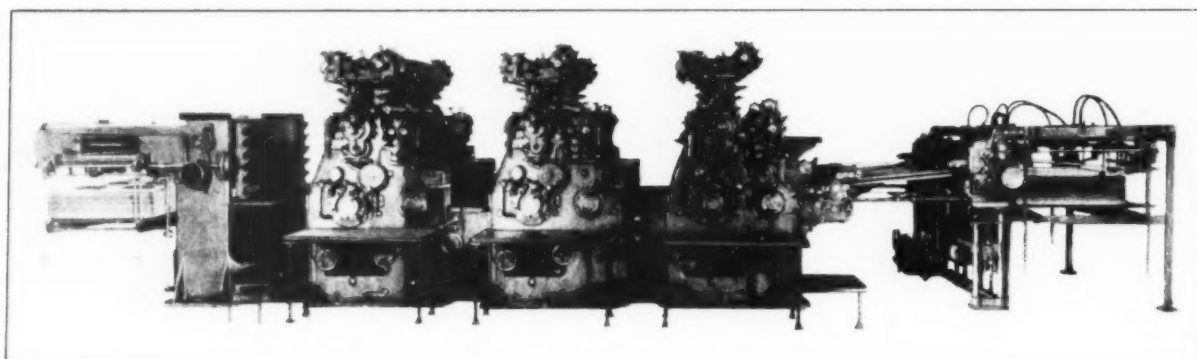




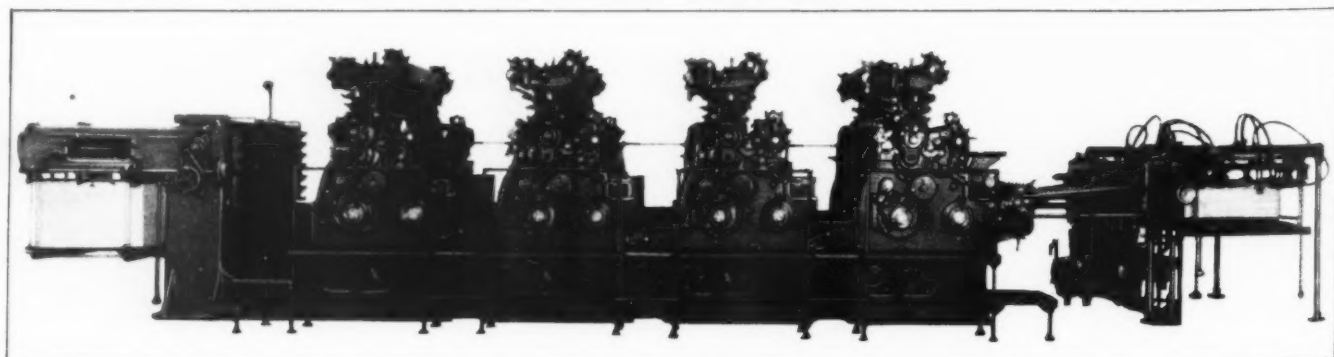
Miehle  
Single-color Offset Press  
Miehle Printing Press & Mfg. Co.



Miehle  
Two-color Unit-type  
Offset Press  
Miehle Printing Press & Mfg. Co.

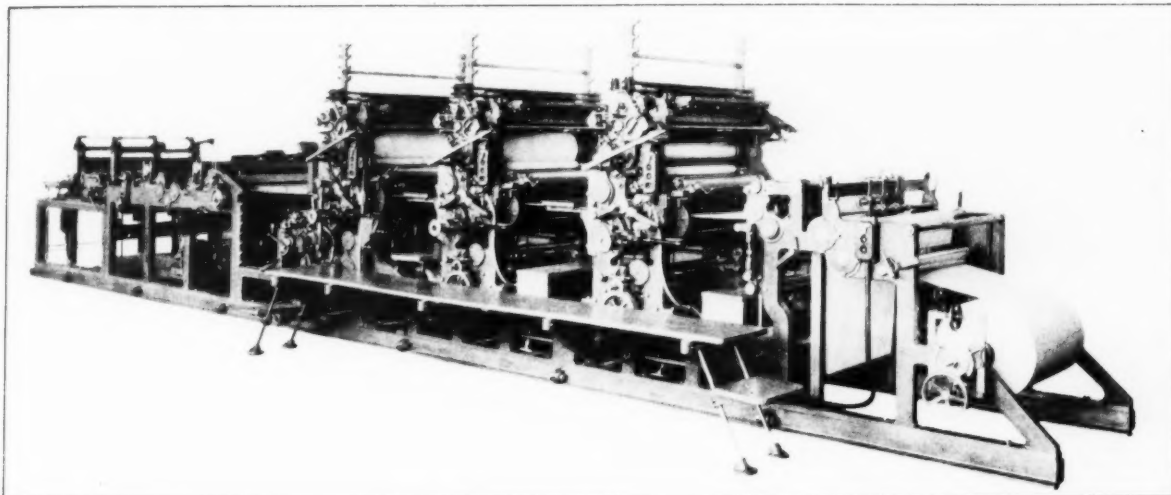


Miehle Three-color Unit-type Offset Press  
Miehle Printing Press & Mfg. Co.

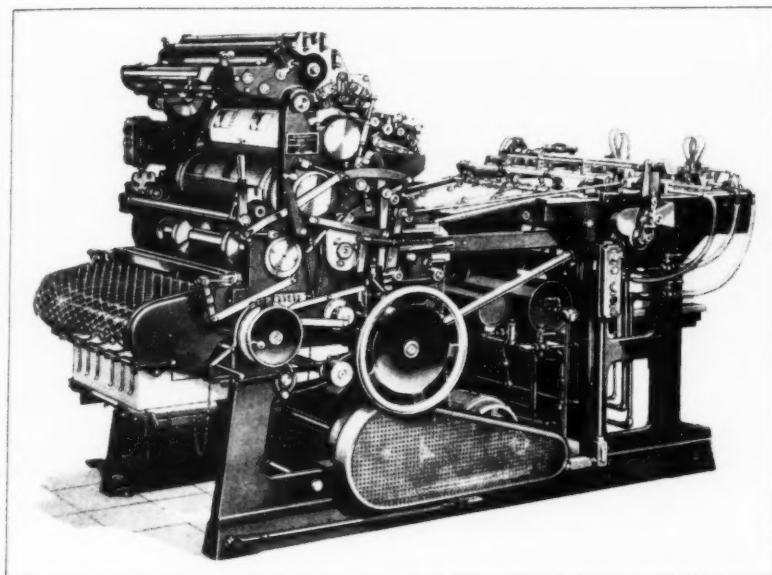


Miehle Four-color Unit-type Offset Press  
Miehle Printing Press & Mfg. Co.

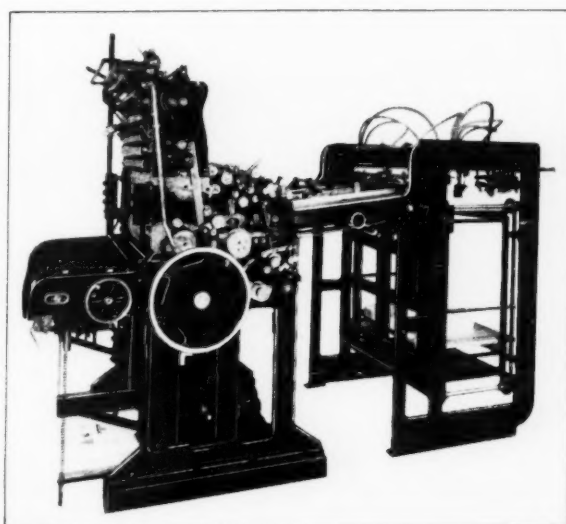




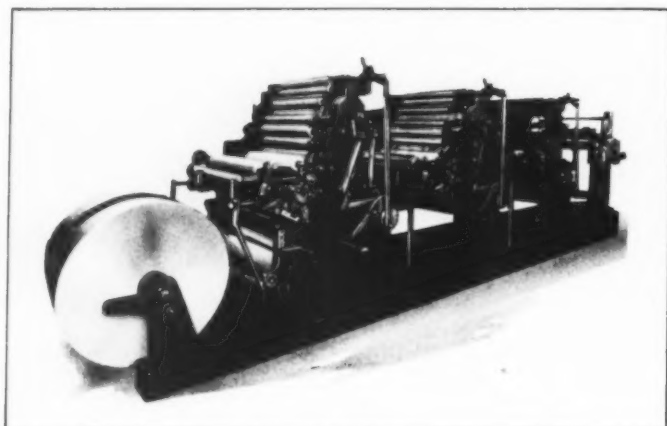
All Size  
Rotary Multi-color  
Webb Offset Press  
New Era Manufacturing Co.



Rutherford High-Speed  
Offset Job Press  
19" x 25"  
Rutherford Machinery Co.



Willard  
Offset Press  
22" x 30"  
Willard Mfg. Corp.



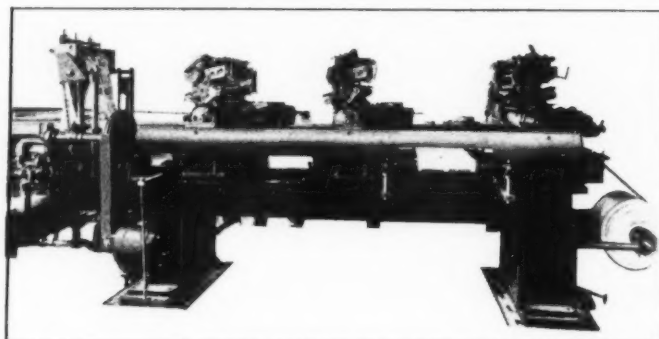
Webendorfer  
Offset Press for Labels  
Webendorfer-Wills Co., Inc.



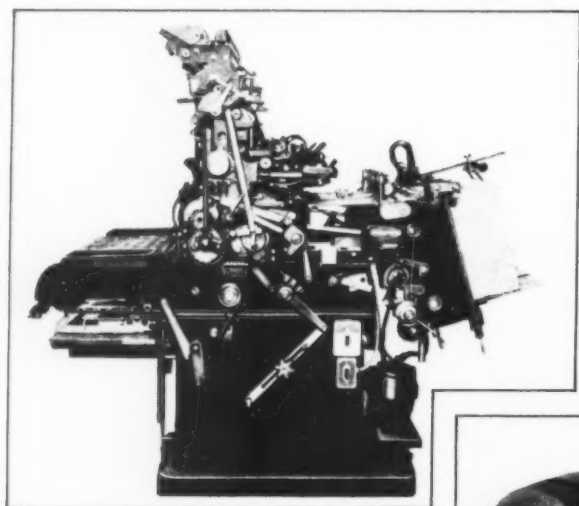
Webendorfer  
Offset Jobber, 12"x18"  
Webendorfer-Wills Co., Inc.



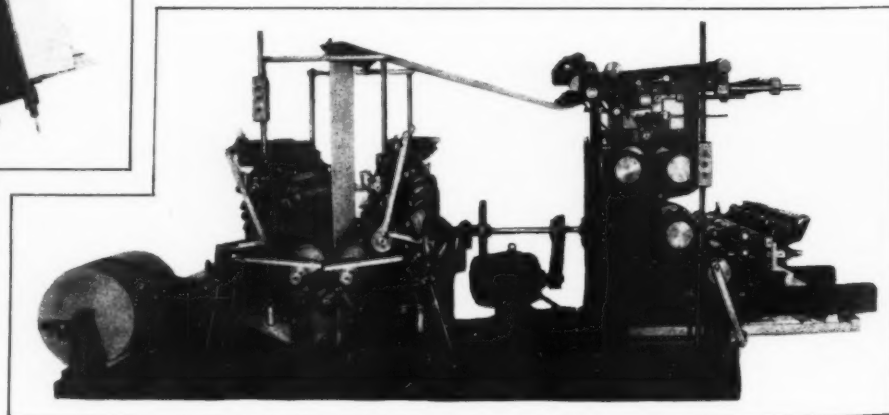
Webendorfer  
Offset Press for Checks,  
Letterheads, Labels, Etc.  
Webendorfer-Wills Co., Inc.



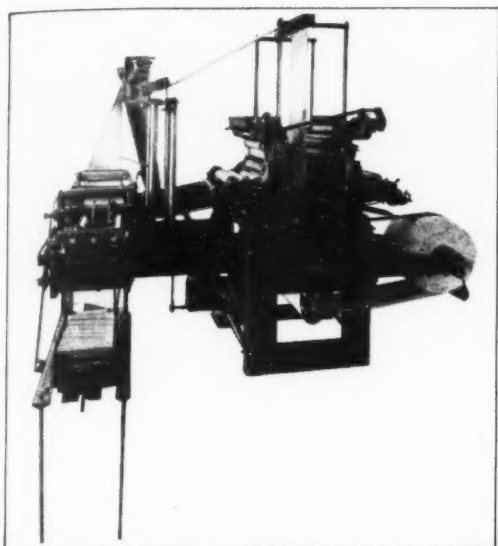
Webendorfer Offset Press  
for Booklets and Programs  
Webendorfer-Wills Co., Inc.



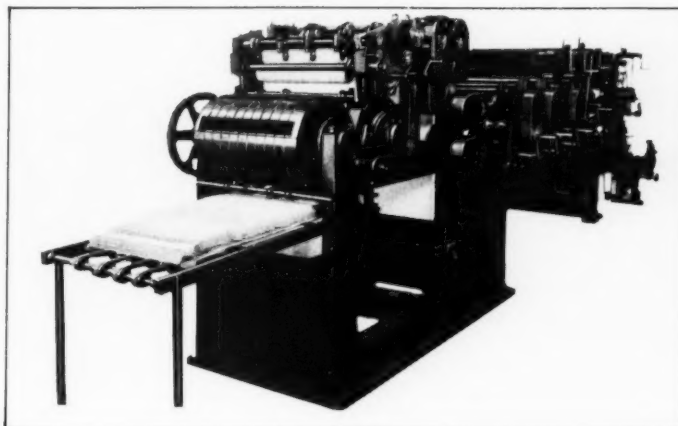
Webendorfer Offset  
Jobber, 17"x22"  
Webendorfer-Wills Co., Inc.



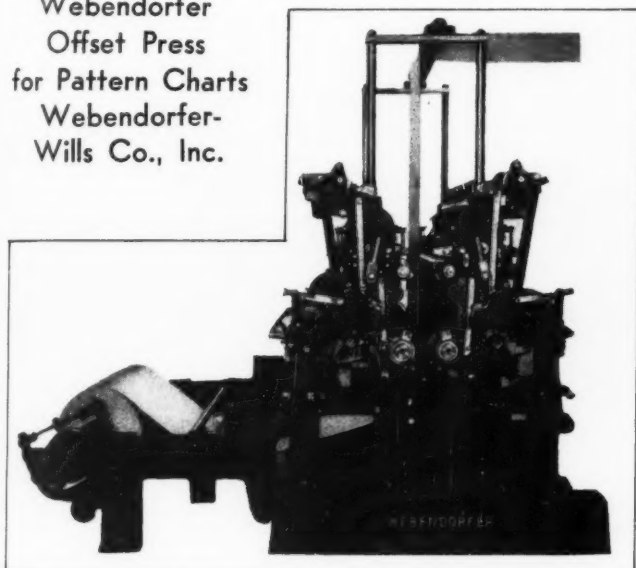
Webendorfer Offset Press for Magazines  
Webendorfer-Wills Co., Inc.



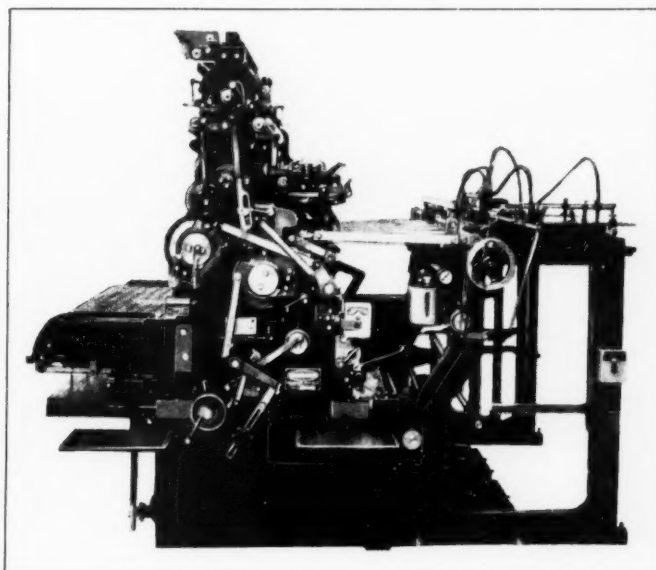
Webendorfer  
Offset Press  
for Pattern Charts  
Webendorfer-  
Wills Co., Inc.



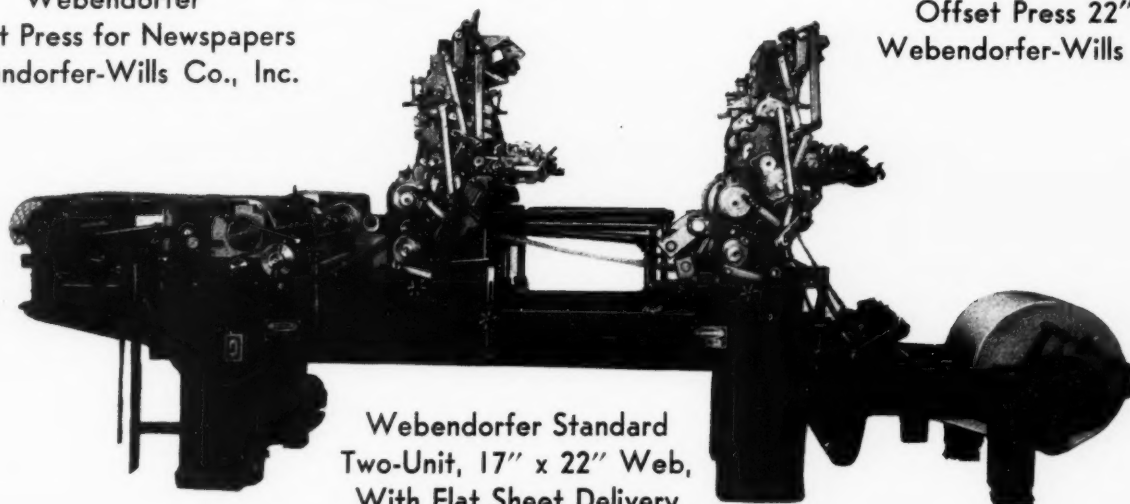
Webendorfer  
Offset Press for Salesbooks  
Webendorfer-Wills Co., Inc.



Webendorfer  
Offset Press for Newspapers  
Webendorfer-Wills Co., Inc.



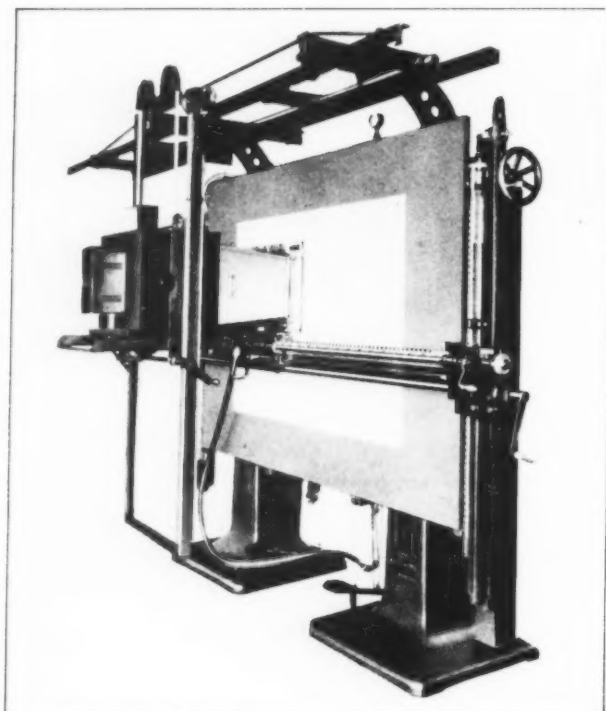
Webendorfer  
Offset Press 22" x 29"  
Webendorfer-Wills Co., Inc.



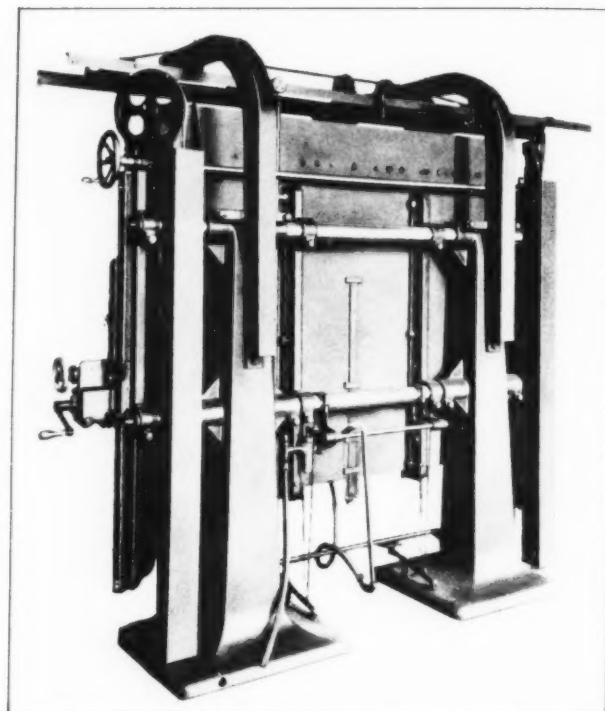
Webendorfer Standard  
Two-Unit, 17" x 22" Web,  
With Flat Sheet Delivery  
Webendorfer-Wills Co., Inc.



# PHOTO-MECHANICAL EQUIPMENT



FRONT

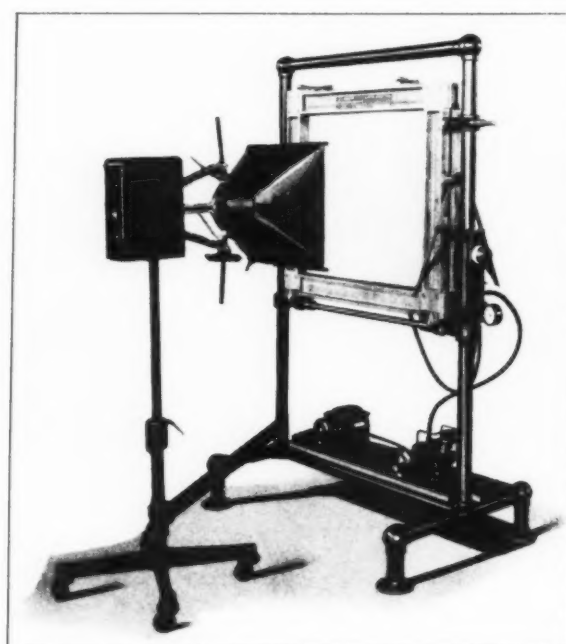


BACK

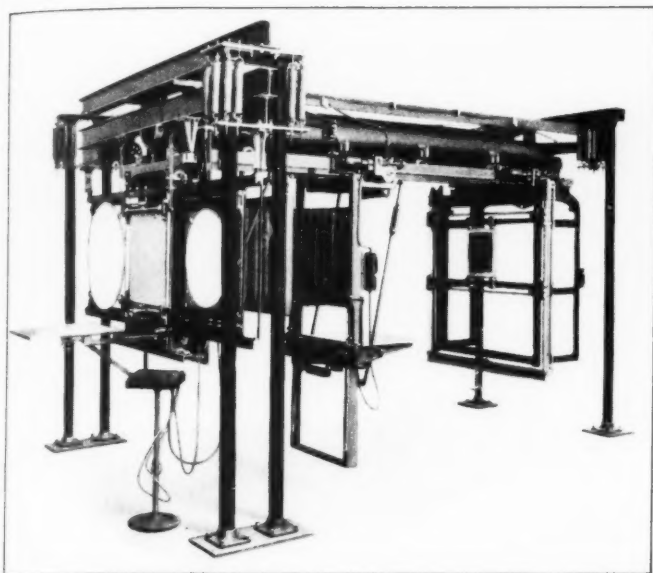
Monotype-Huebner Vertical Photo-Composing Machine With Non-Embossing Negative Holder and Universal Register Device. Lanston Monotype Machine Co.



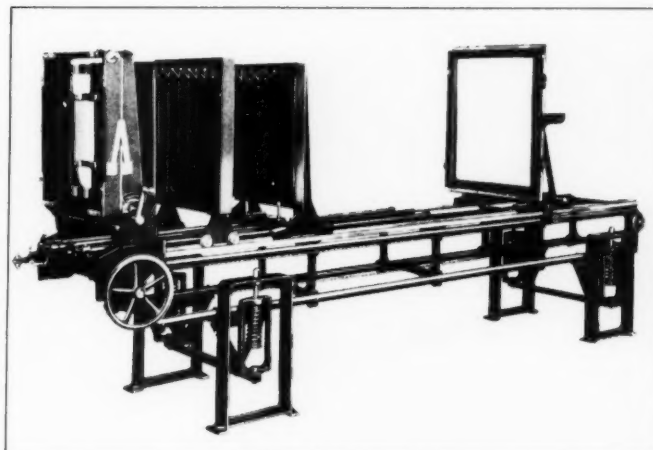
Montype-Directoplate  
Simplex Photo-Composing Machine  
Lanston Monotype Machine Co.



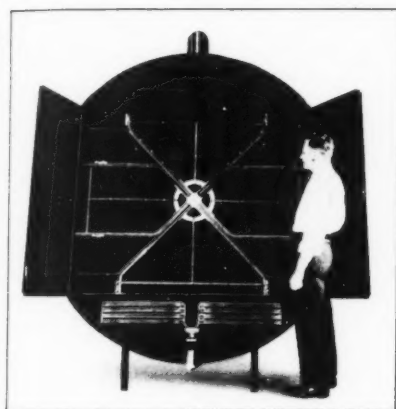
Monotype-Huebner Vacuum Printing Frame  
Lanston Monotype Machine Co.



Monotype-Huebner Overhead Motor-Focusing Camera  
Lanston Monotype Machine Co.



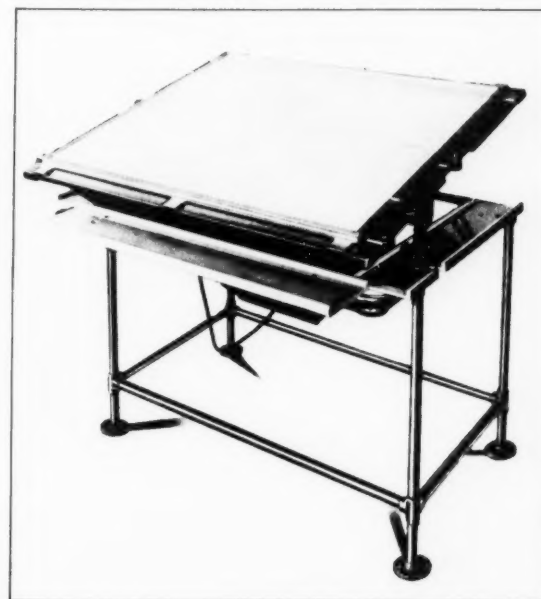
Monotype-Directoplate  
All-Metal Camera  
Lanston Monotype Machine Co.



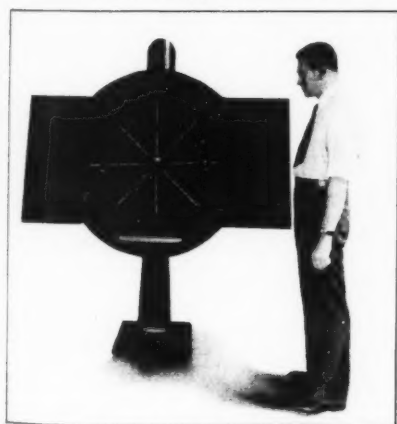
Monotype-Huebner  
Vertical Plate Coating Machine  
Lanston Monotype Machine Co.



Monotype-Huebner  
Universal Registering Device  
Lanston Monotype Machine Co.

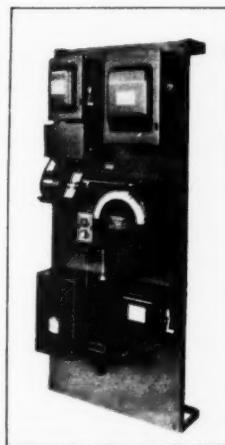


Monotype-Huebner  
Adjustable Layout and Register Table  
Lanston Monotype Machine Co.



Monotype-Huebner  
Vertical Plate Coating Machine  
Junior Model  
Lanston Monotype Machine Co.

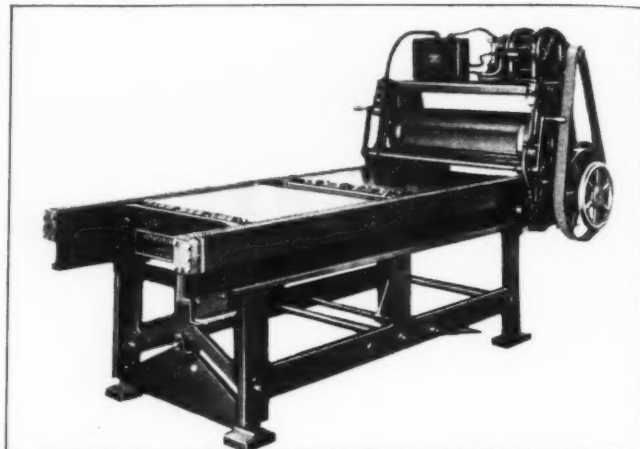
Monotype-Directoplate  
Light-Timing Device  
Lanston Monotype Machine Co.



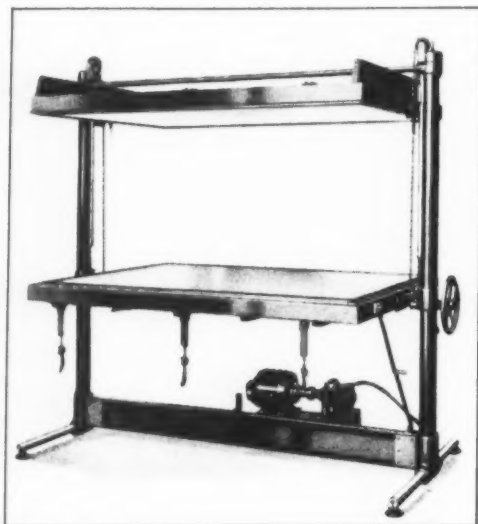
Monotype-Huebner  
Register Chase  
Lanston Monotype  
Machine Co.



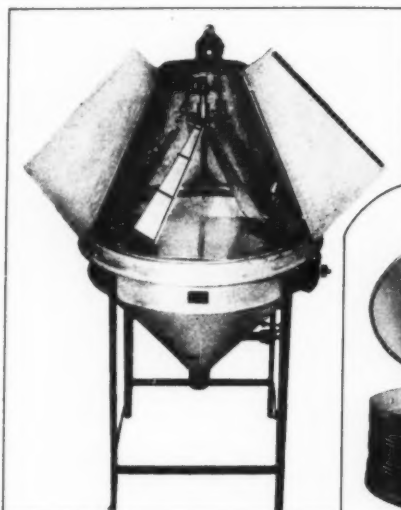
Rutherford Rubber Transfer Cylinder Hand Press  
Rutherford Machinery Co.



Rutherford  
Offset Color Proofing Press  
Rutherford Machinery Co.



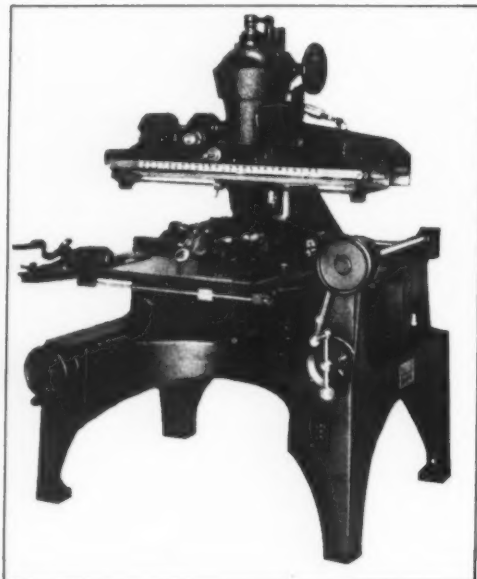
Rutherford Vacuum Printing Frame  
46" x 60" and 50" x 70"  
Rutherford Machinery Co.



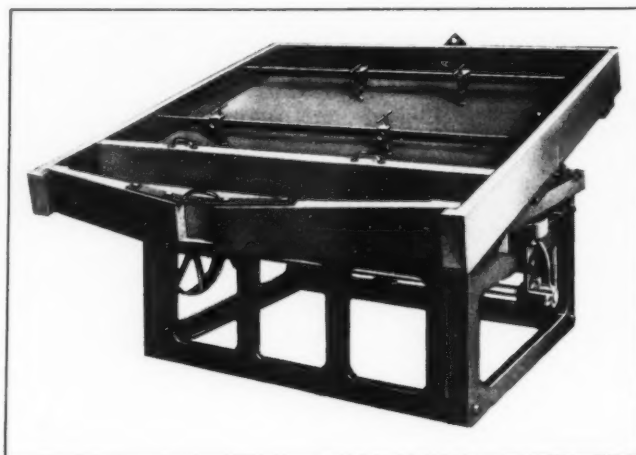
Rutherford  
Photo-Lac Whirler for Plates  
20" x 24"  
Rutherford Machinery Co.



Rutherford  
Plate Whirler  
Rutherford Machinery Co.

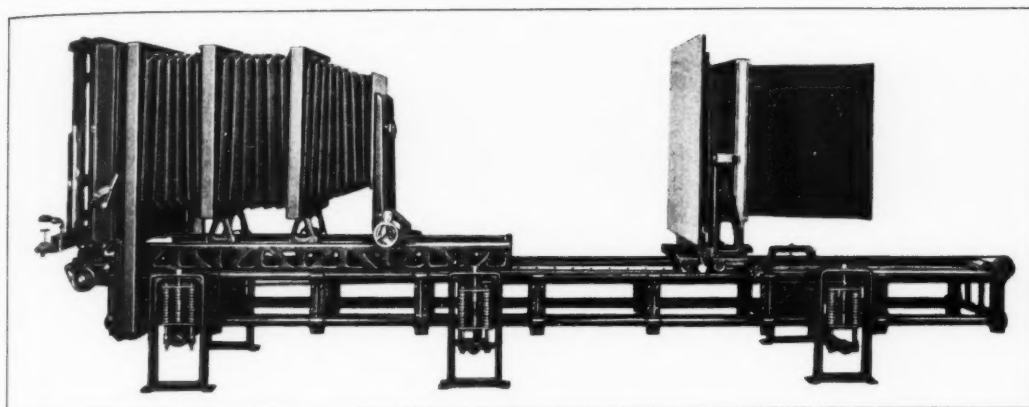


Rutherford Photo-Lettering Machine  
Rutherford Machinery Co.

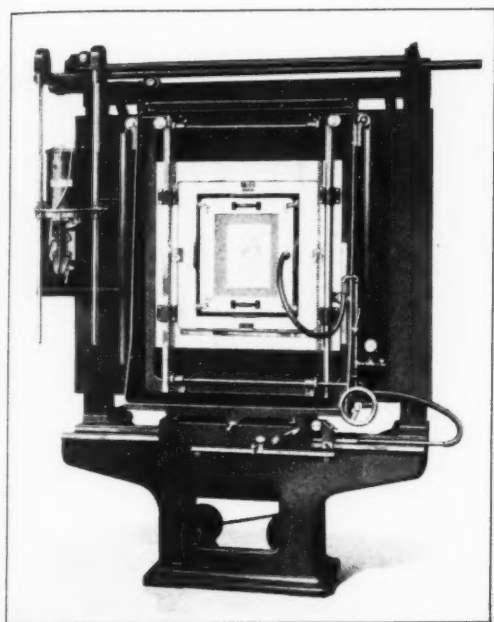


Rutherford Plate Graining Machine  
Rutherford Machinery Co.

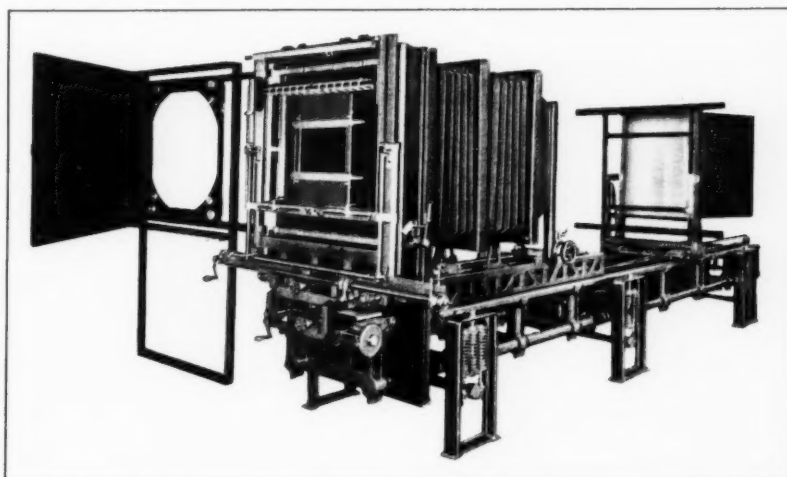




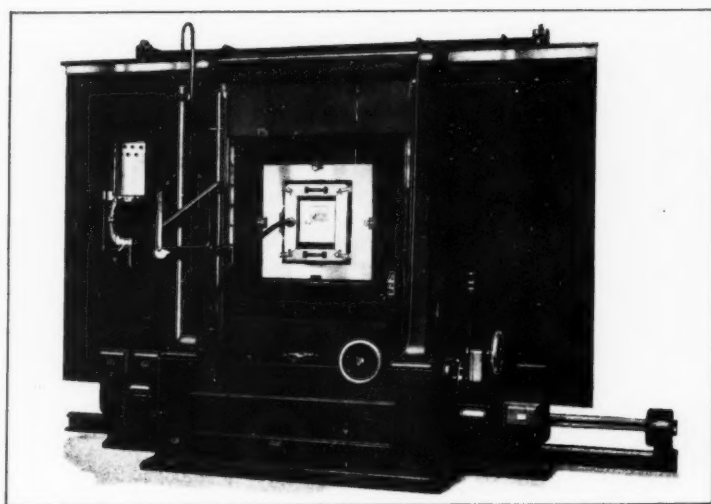
Rutherford  
Precision Camera  
Four Sizes  
Rutherford Machinery Co.



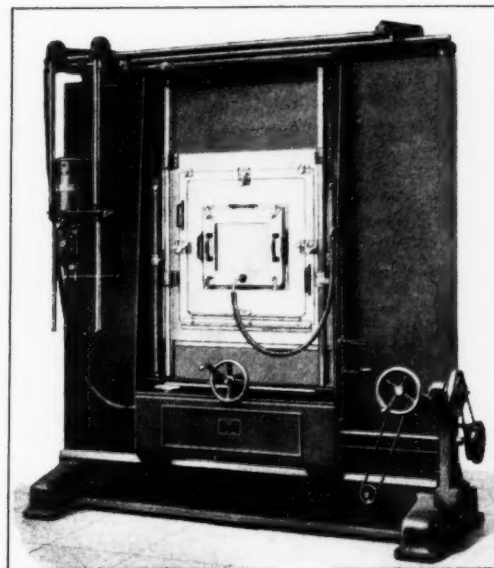
Rutherford  
Planograph  
Composing Machine  
Rutherford Machinery Co.



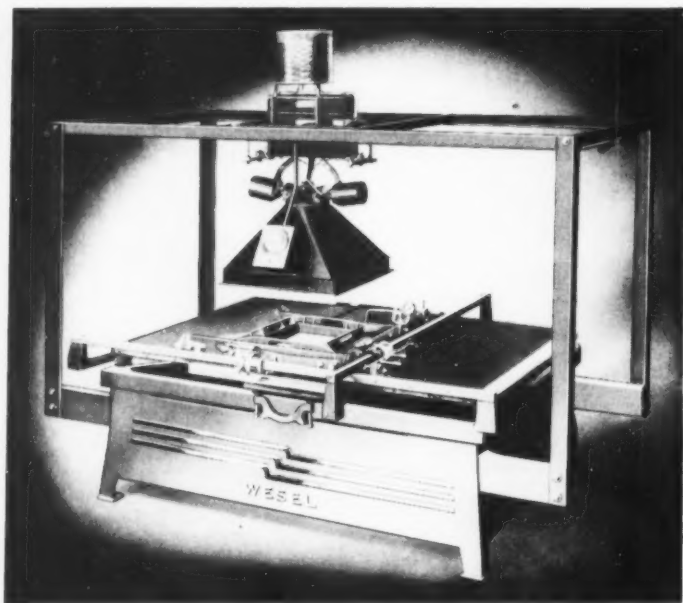
Rutherford Precision Camera With Screen  
Storage Rack and Multiple Negative Holder  
Rutherford Machinery Co.



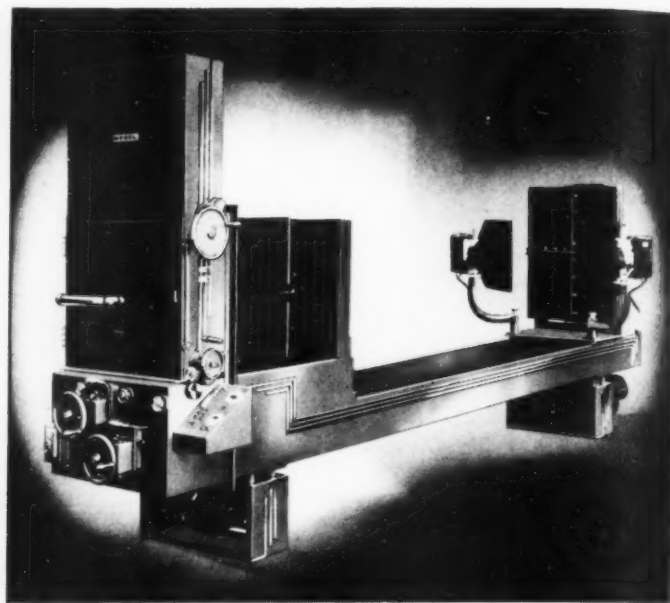
Rutherford  
Precision Photo-Composing Machine  
Rutherford Machinery Co.



Rutherford  
Photo-Composing Machine  
Rutherford Machinery Co.



Wesel Eureka Precision Photo-Composing Machine  
Wesel Manufacturing Co.



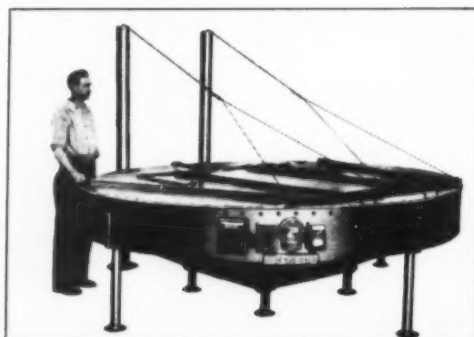
Wesel Automatic Electric Precision Camera  
Wesel Manufacturing Co.



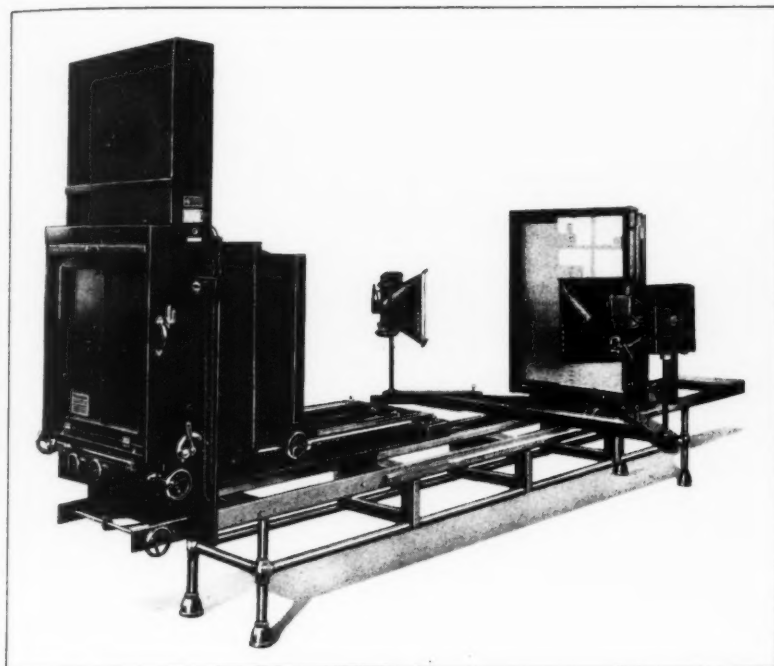
Wesel Vacuum Printing Machine, Closed View  
Wesel Manufacturing Co.



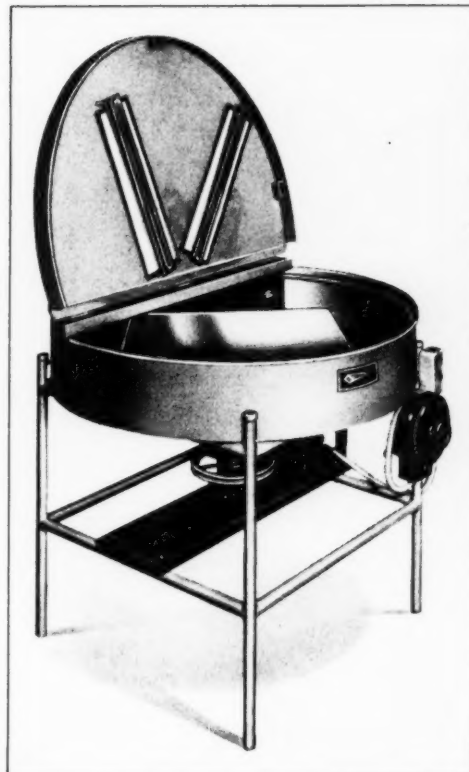
Wesel Vacuum Printing Machine, Open View  
Wesel Manufacturing Co.



Wesel  
Plate Coating Machine  
Wesel Manufacturing Co.



Robertson Dark Room Camera  
R. R. Robertson



Robertson  
Plate Whirler  
R. R. Robertson

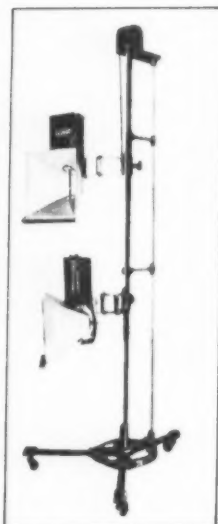


Robertson Vacuum Frame, Type "U"  
R. R. Robertson



Robertson Automatic Vacuum Printing Frame  
R. R. Robertson





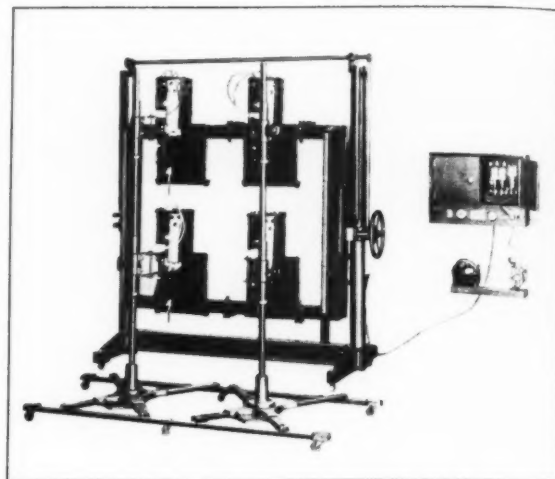
Solar-Lite  
Camera Lamp  
Type BD-SRK  
Atlas Electric  
Devices Co.



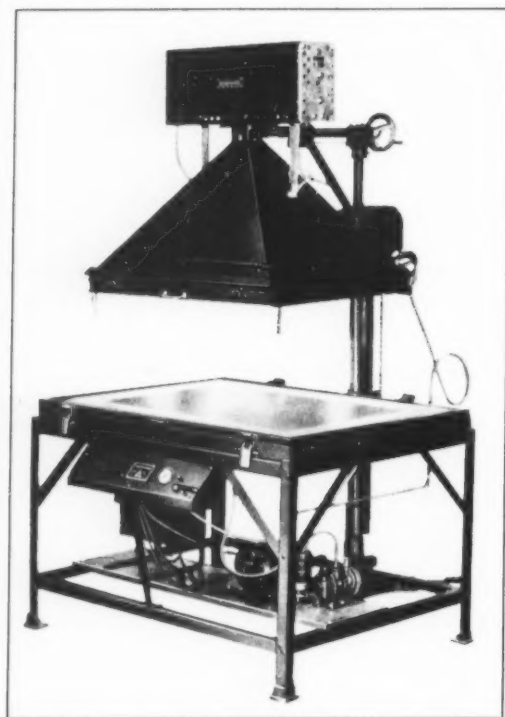
Solar-Lite  
Twin Arc Printer  
Type SRK  
Atlas Electric  
Devices Co.



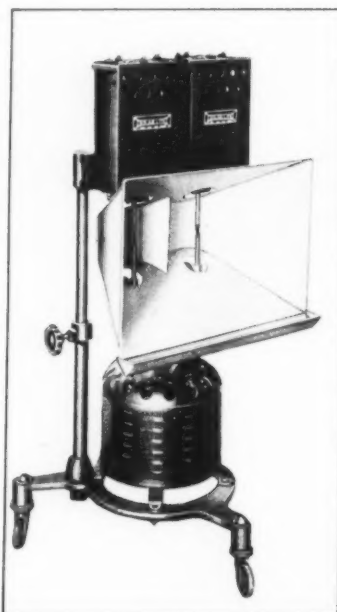
Solar-Lite  
Printing Lamp  
Meiers Type MPL  
Atlas Electric  
Devices Co.



Solar-Lite  
Double Deck Printer, Type SRK-DN  
with Type ACW Composing Unit  
and Automatic Control  
Atlas Electric Devices Co.



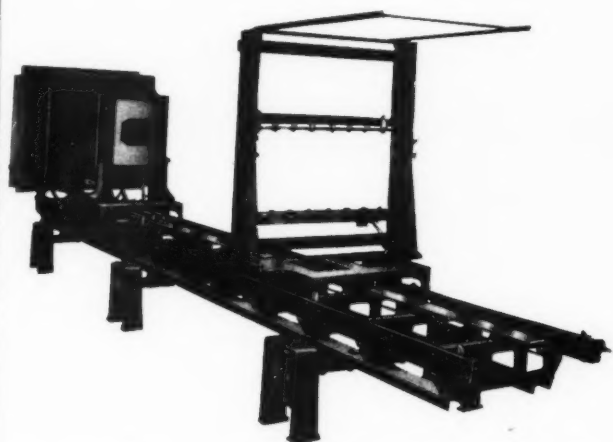
Horizontal  
Composing Unit, Type HCU  
Atlas Electric Devices Co.



Solar-Lite  
Twin Arc Two-Face Printer  
Type SRK-W  
Atlas Electric  
Devices Co.



Solar-Lite  
Camera Lamp  
Type SRK  
Atlas Electric  
Devices Co.



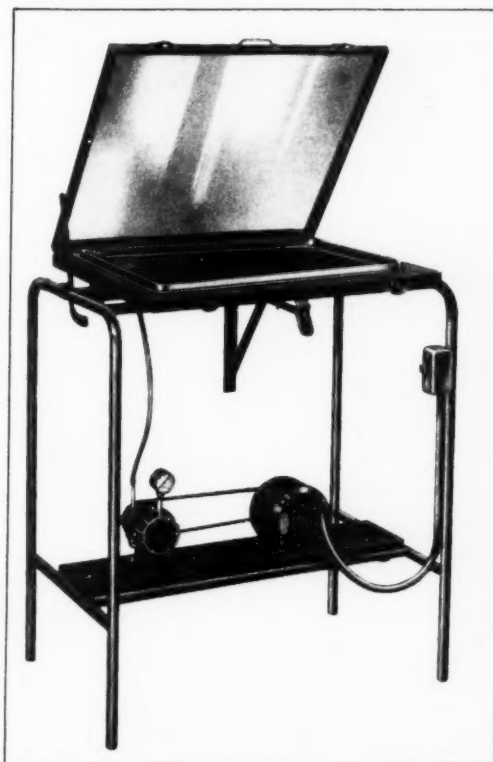
Valette Color Precision Camera  
Litho Equipment & Supply Co.



Valette Dark Room Camera  
Litho Equipment & Supply Co.



Valette  
Vacuum Printing Frame  
Elevating Type  
Litho Equipment  
& Supply Co.



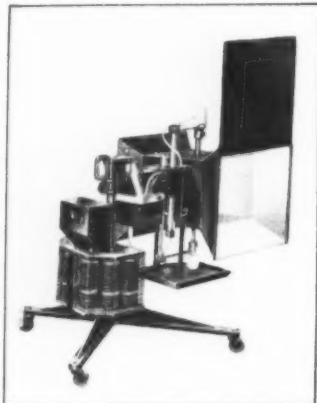
Valette  
All Metal Vacuum  
Printing Frame  
Litho Equipment  
& Supply Co.



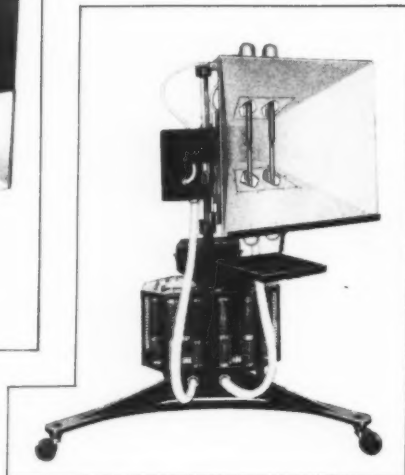
Valette  
Plate Graining  
Machine  
Litho Equipment  
& Supply Co.



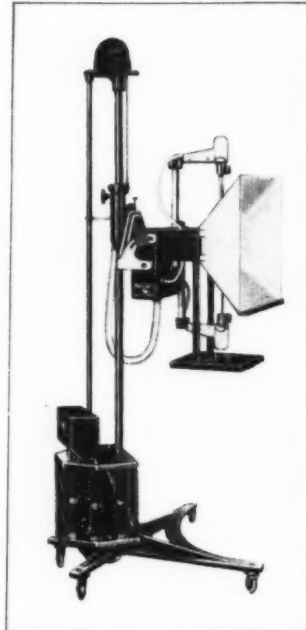
Valette  
Whirler — Plate Coating  
Machine  
Litho Equipment  
& Supply Co.



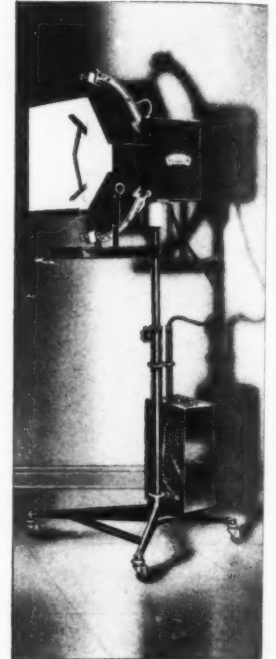
Pease Two-Speed  
Double Reflector  
45-90 ampere type  
The C. F. Pease Co.



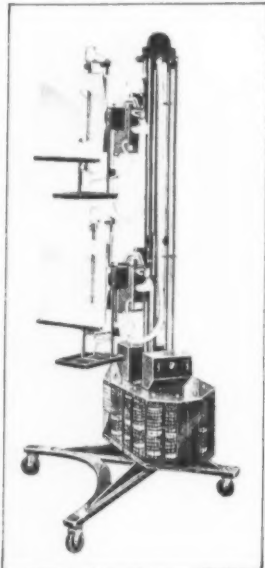
Pease Two-Speed Twin Arc  
45-90 ampere type  
The C. F. Pease Co.



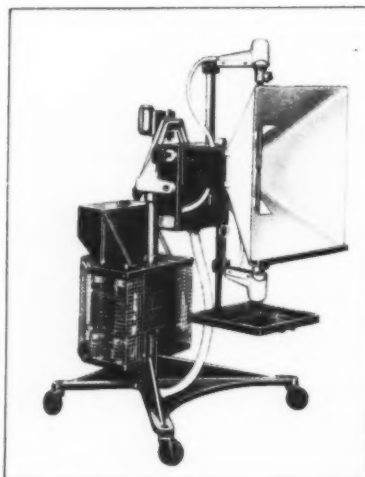
Pease Two-Speed  
Spring Balance  
45-90 ampere type  
The C. F. Pease Co.



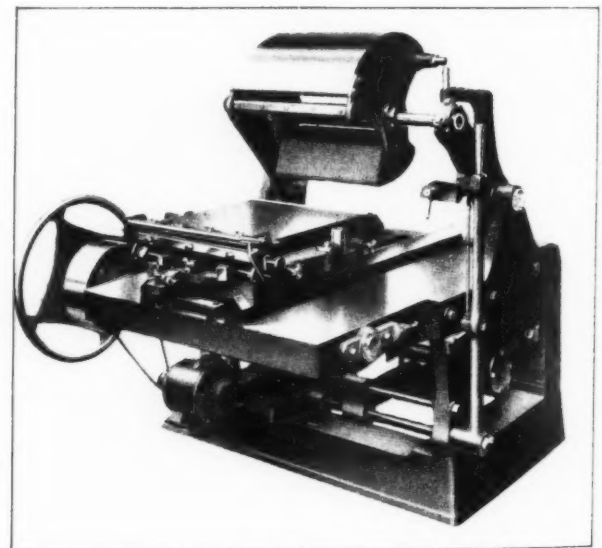
Pease One-Speed Telescoping  
35 ampere speed  
The C. F. Pease Co.



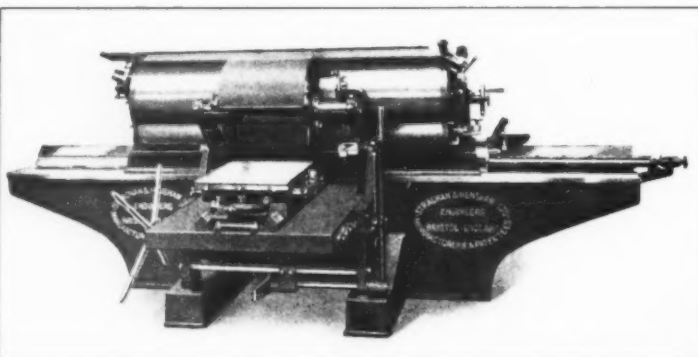
Pease Heli-O Double Deck  
45-90 ampere type  
The C. F. Pease Co.



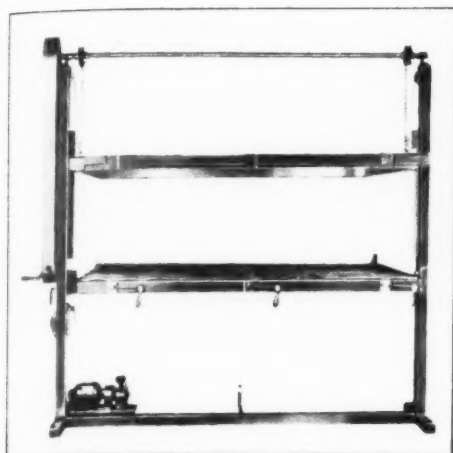
Pease Two-Speed Telescoping  
45-90 ampere type  
The C. F. Pease Co.



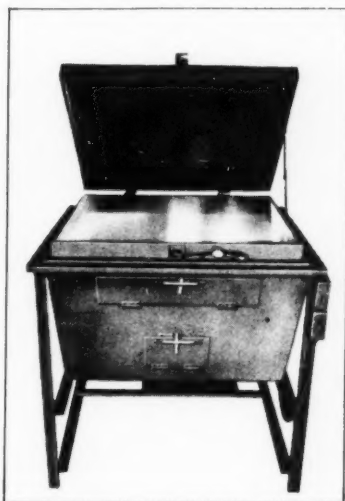
Litho Proofing Press  
Strachan & Henshaw Co., Ltd.



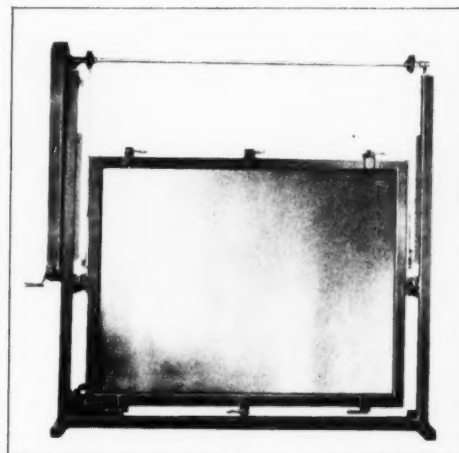
Mechanical  
Step and Repeat Machine  
Strachan & Henshaw Co., Ltd.



Miles All Metal Glass Raising  
Vacuum Printing Frame  
Miles Machinery Co.



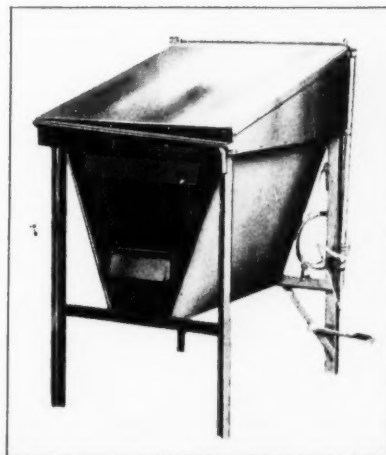
Miles Dark Room  
Vacuum Printing Frame  
Miles Machinery Co.



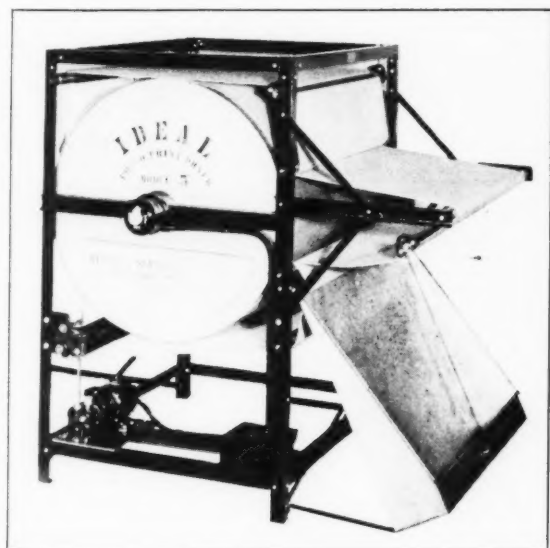
Miles All Metal Glass Raising  
Vacuum Printing Frame  
Miles Machinery Co.



Miles Combination  
Flat and Slanting  
Layout Table  
Miles Machinery Co.



Miles Negative  
Reducing and  
Dot Etching Table  
Miles Machinery Co.

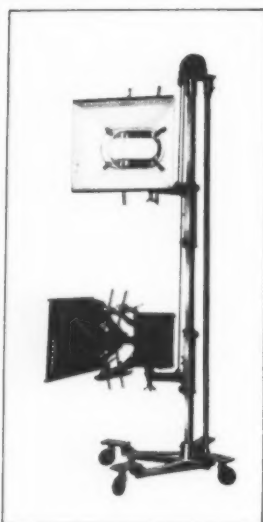


Ideal Photo Print Dryer  
Simplex Specialty Co., Inc.

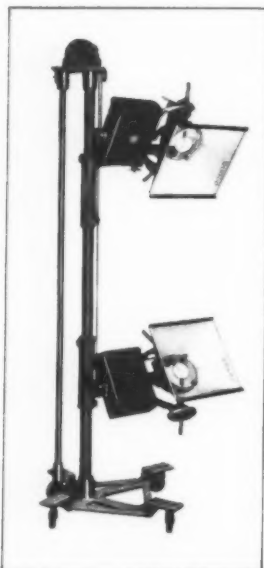


Eastman Transmission and Reflection Densitometer  
Eastman Kodak Co.

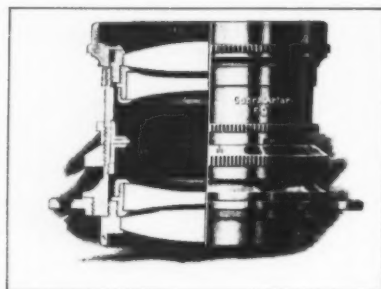




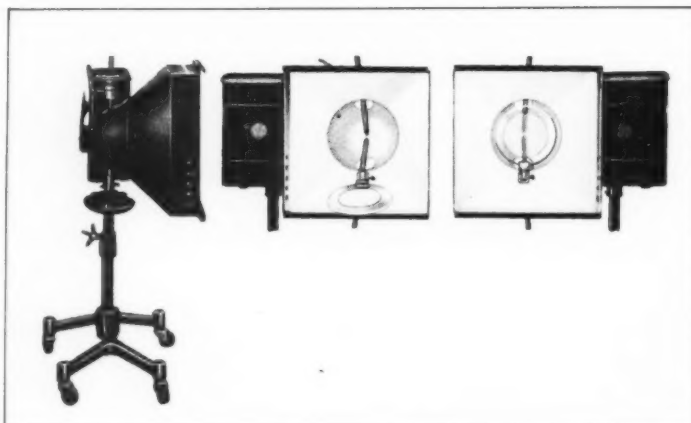
Gelb Camera Lamp,  
Model C-124-D.A.D.  
Gelb Lamp Mfg. Co.



Gelb Camera Lamp,  
Model C-125-T.C.D.  
Gelb Lamp Mfg. Co.



Goerz Artar Lens  
C. P. Goerz  
American Optical Co.



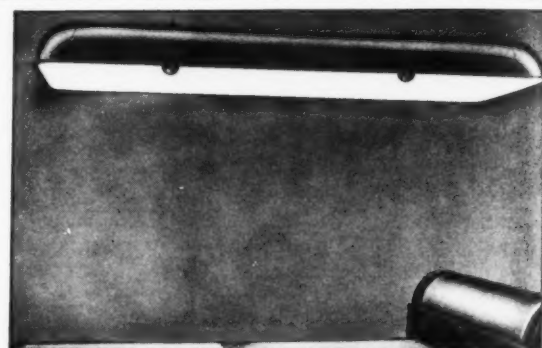
Gelb Printing Lamp, Model C-125-T  
Gelb Lamp Mfg. Co.



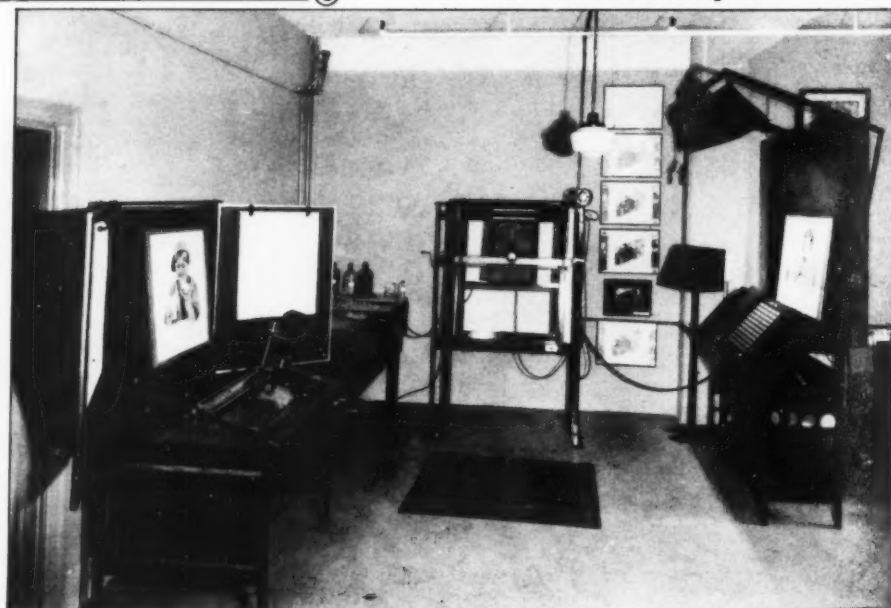
Gelb Printing Lamp,  
Model C-116-SF  
Gelb Lamp Mfg. Co.



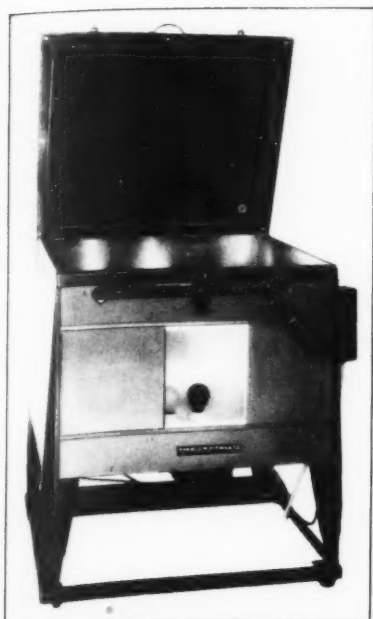
Gelb  
Printing Lamp,  
Model C-124-DA  
Gelb Lamp Mfg. Co.



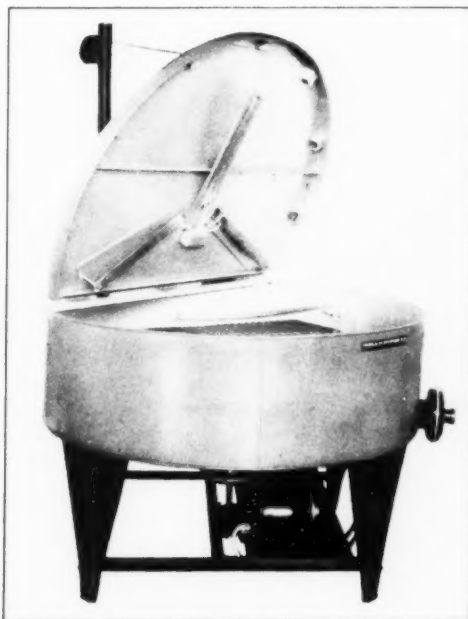
Giant Indirect Lighting Units  
for Lithographic and Printing Plants  
Giant Manufacturing Co.



Huebner Color Control and Measuring Equipment  
Huebner Laboratories, Inc.



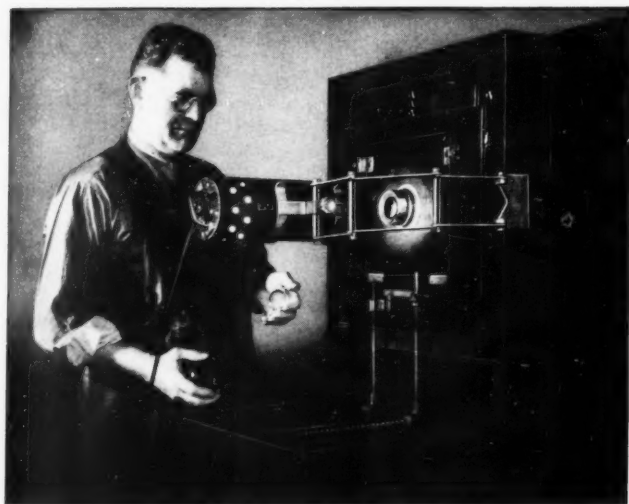
Pitman Vacuum Film Printer  
Harold M. Pitman Company



Pitman Litho Plate Whirler  
Harold M. Pitman Company



Pitman  
Elevating Type Vacuum Frame  
Harold M. Pitman Company



Pitman Halftone Flashing Lamp  
Harold M. Pitman Company

For complete information on  
happenings at the conven-  
tion — — —

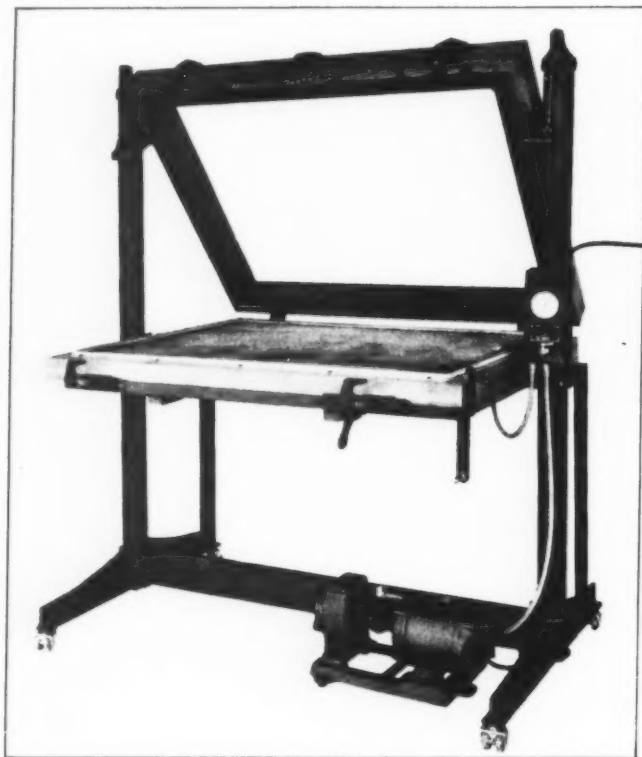
*read the  
October issue*



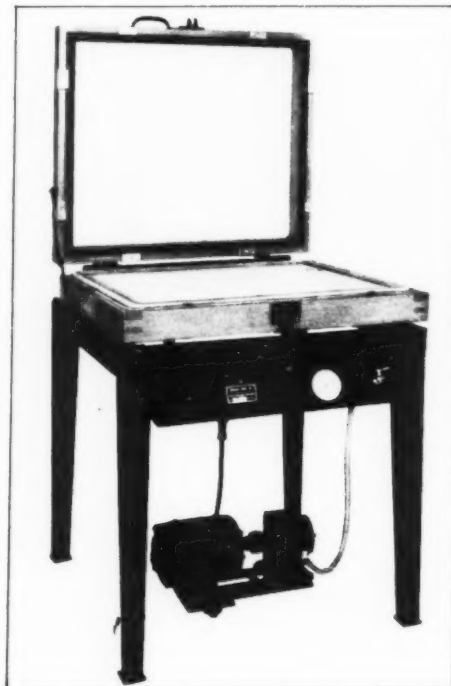
Zeiss Optical Instruments for Process Work  
Carl Zeiss, Inc.

Master  
Negative Stripper  
Engravers Equipment  
Company





Sweigard Ideal Improved Baby Vacuum Frame—With or Without Vacuum Tank and Automatic Switch  
Sweigard Ideal Co.



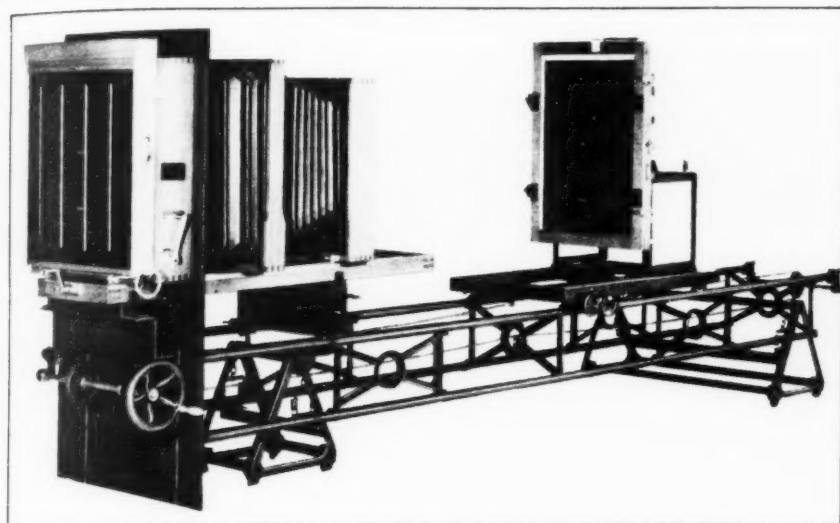
Sweigard  
Ideal Improved  
Vacuum Frame—  
Type C,  
With or Without  
Vacuum Tank and  
Automatic Switch  
Sweigard Ideal Co.



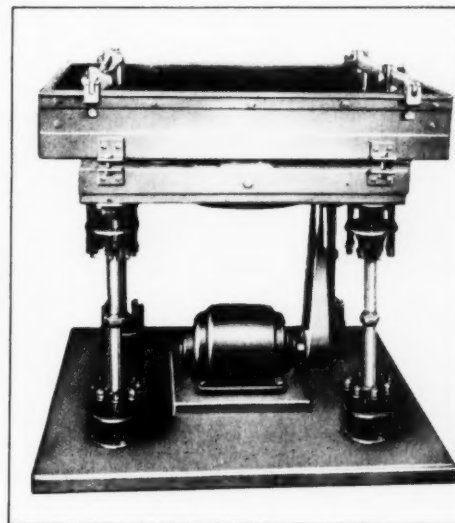
Sweigard Ideal Improved Vacuum Frame—  
Type B, With or Without Vacuum Tank  
and Automatic Switch  
Sweigard Ideal Co.



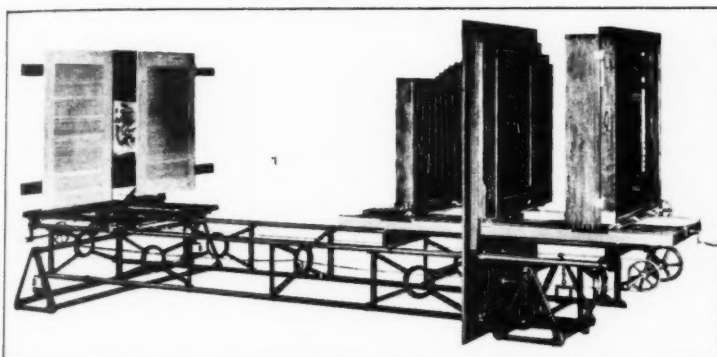
Beattie's Litho-Twins Single Arcs  
Beattie's Hollywood Hi-Lite Co.



Levy Series "A" Camera, Dark Room Type  
Repro-Art Machinery Co.

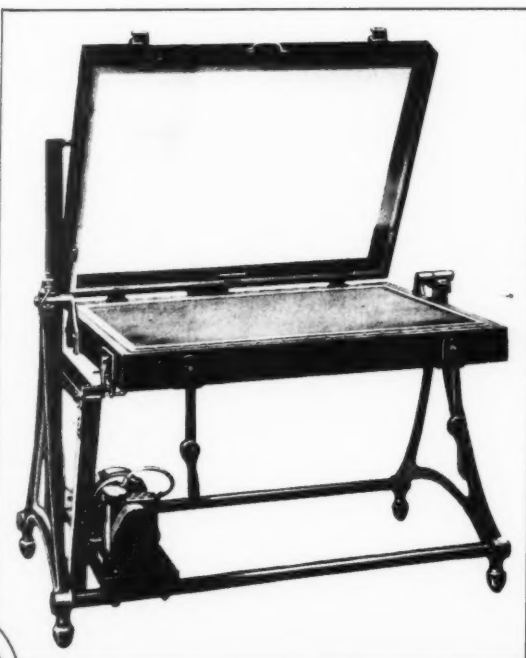
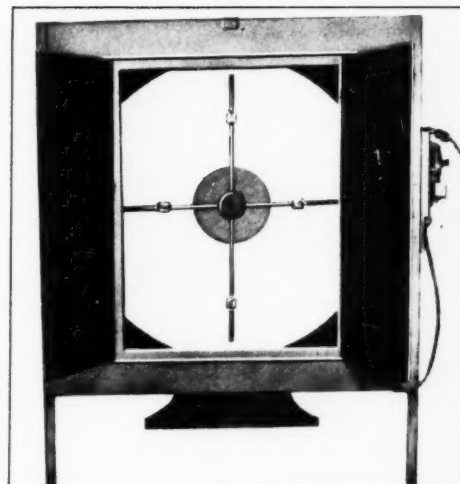


Fritsche Roto Graining Machine  
Rudolph Fritsche



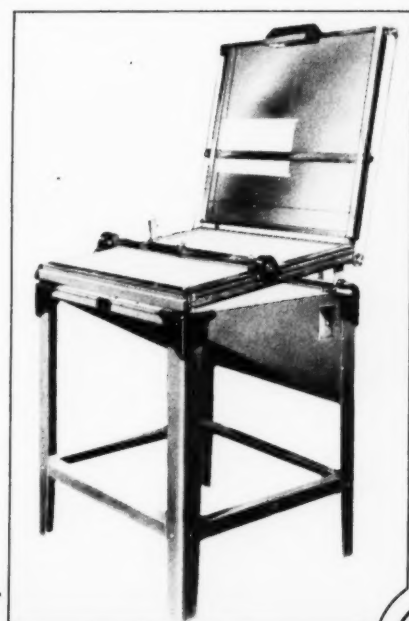
Levy Series "C" Precision Semi-Metal  
Camera, Dark Room Type  
Repro-Art Machinery Co.

Fritsche Perpendicular  
Dustless Roto Plate  
Coating Machine  
Rudolph Fritsche

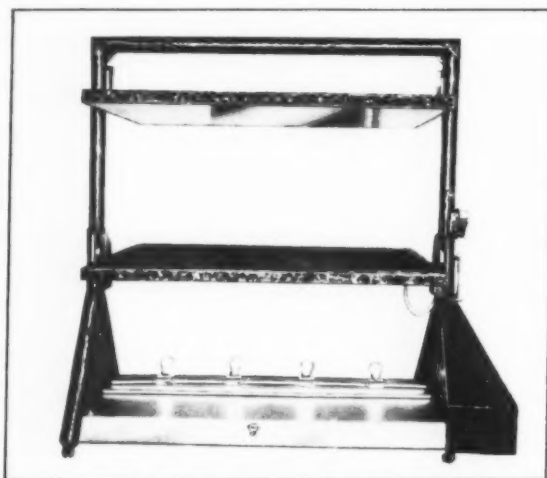


Levy Vacuum  
Printing Frame,  
Made with  
Glass or Blanket  
Repro-Art Machinery Co.

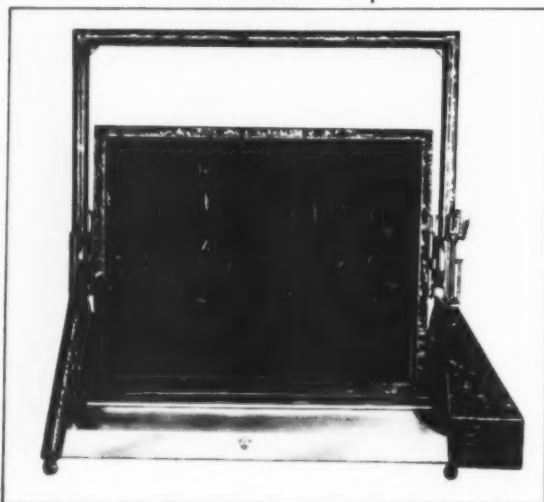
Craftsman Precision  
Copy Line-up  
and Negative Ruler  
Craftsman Line-Up Table Corp.



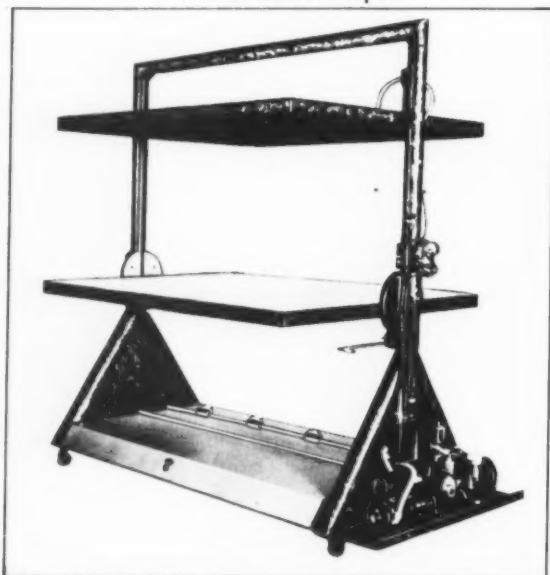




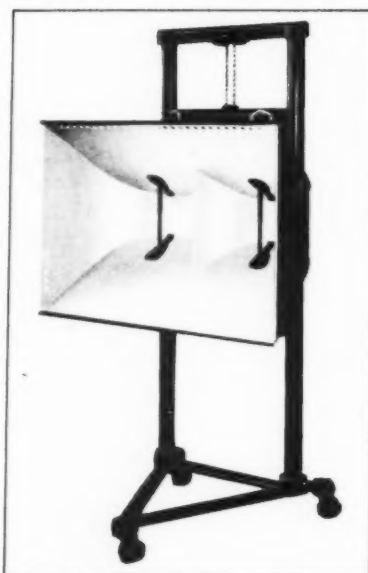
Douthitt Duo-Type Printing Machine  
The Douthitt Corp.



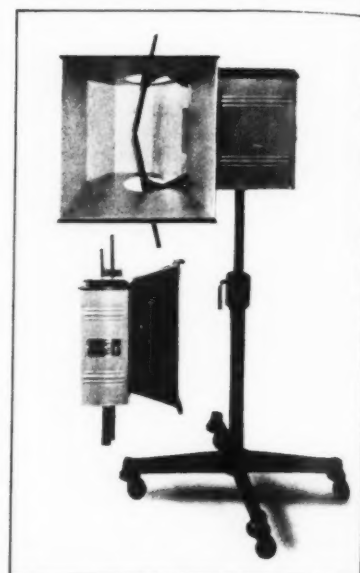
Douthitt Duo-Type Printing Machine  
The Douthitt Corp.



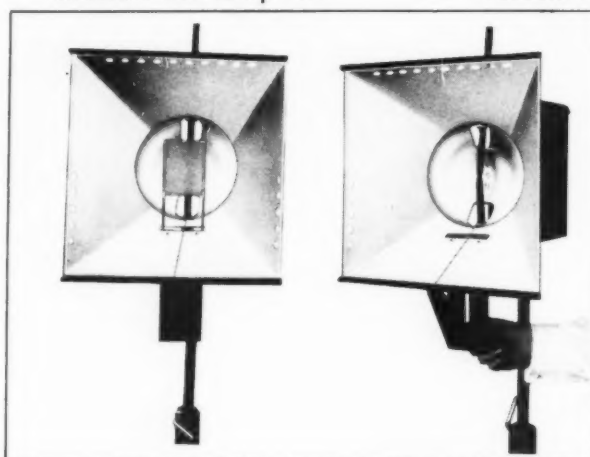
Douthitt Duo-Type Printing Machine  
The Douthitt Corp.



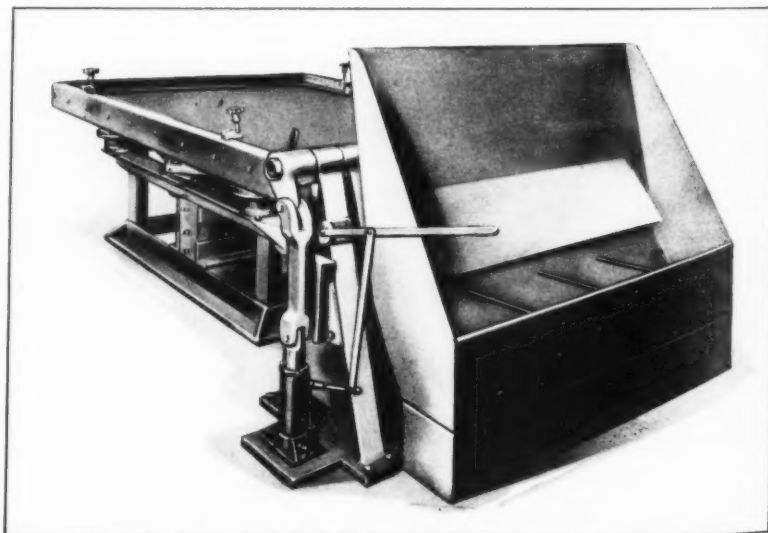
Macbeth Printing Lamp  
for Large Frames  
Macbeth Arc Lamp Co.



Macbeth Dark Room  
Camera Lamp  
Macbeth Arc Lamp Co.

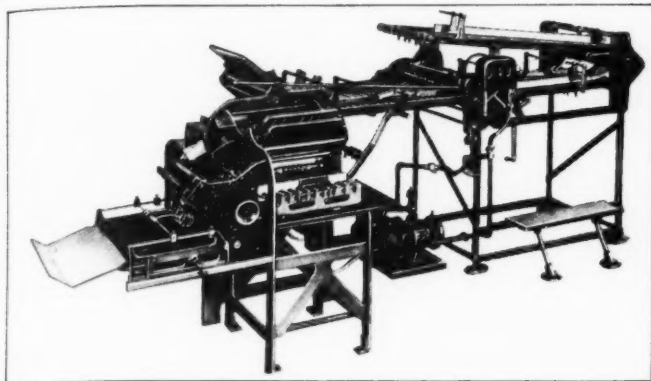


Macbeth  
Elective  
Close-Up  
Diffuser  
Macbeth Arc  
Lamp Co.

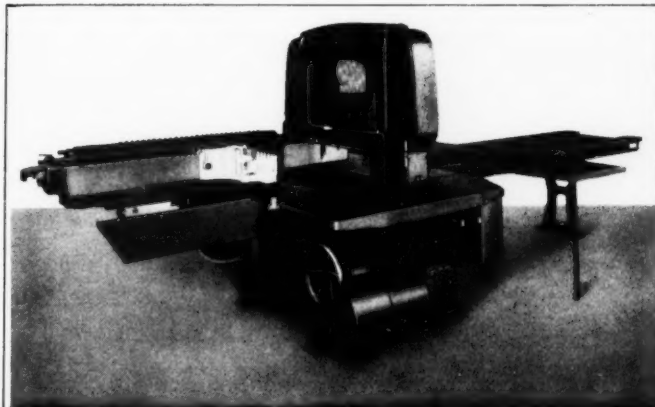


Zenith Graining Machine  
Zarkin Machine Co., Inc.

## LITHOGRAPHIC EQUIPMENT - MISCELLANEOUS



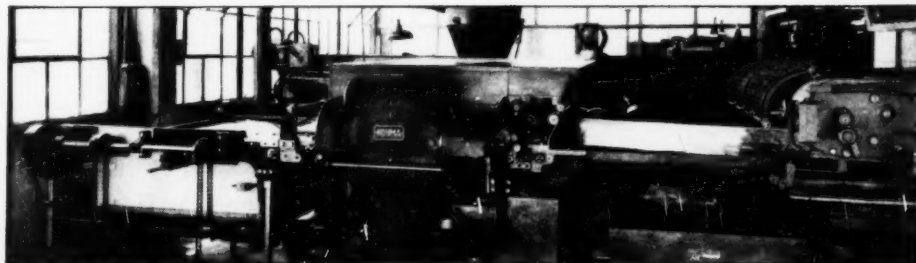
Cleveland Model Double "O" Folder  
Folds Sheets from 4" x 6" to 22" x 28"  
Dexter Folder Co.



Improved Brackett Model "A" Safety Trimmer  
Dexter Folder Co.



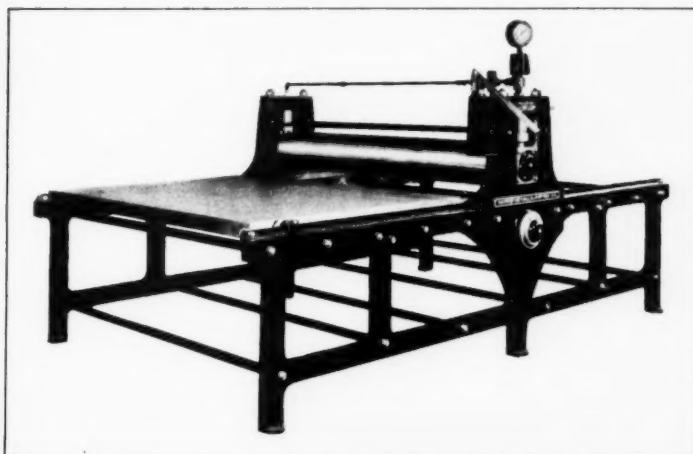
G-E Heavy-Duty  
Push-Button Station,  
Mounted on Offset Press  
General Electric Company



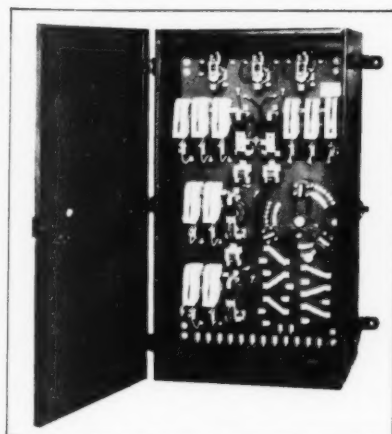
Milwaukee Bronzer With Offset Press, 59"  
C. B. Henschel Mfg. Co.



Catchdew Unit Device for  
Correction of High Humidity in  
Lithograph and Printing Plants  
The Advance Manufacturing Co.

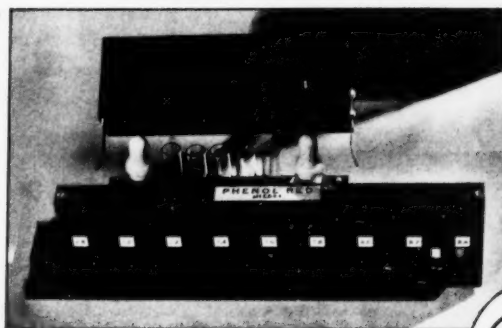


Traung Transfer Press  
Harris-Seybold-Potter Co.



G-E Preset-Speed  
Printing-Press Controller  
General Electric Company

Taylor Slide  
Comparator for  
Control of  
Press Fountain  
Solutions  
W. A. Taylor  
& Co., Inc.



## MACHINES FOR PREPARING COPY



Royal  
Carbon Ribbon  
Typewriter  
Equipped with  
High Speed  
Ribbon Feed  
Royal  
Typewriter Co., Inc.

Vari-Typer  
Composing Unit  
for  
Photo-Offset Work  
The Ralph C.  
Coxhead Corp.



Underwood  
Noiseless Typewriter  
Equipped with  
Duplex Carbon and  
Fabric Ribbon Feature  
Underwood-Elliott-  
Fisher Co.

L. C. Smith  
New Super-Speed  
Typewriter  
L. C. Smith &  
Corona Typewriters, Inc.

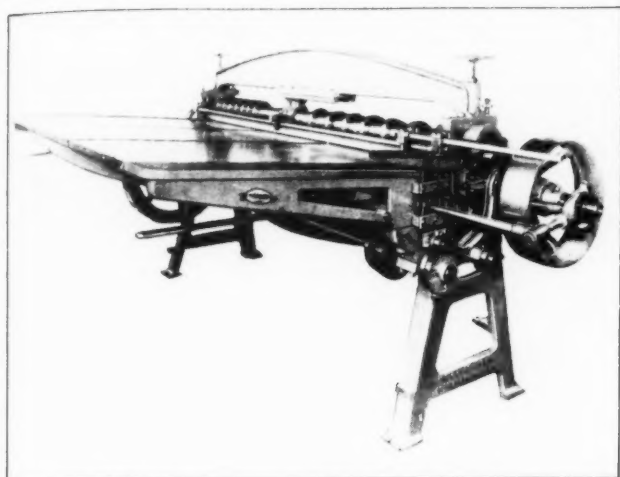


International  
Electric Carbon Ribbon  
Writing Machine  
Produces Uniform  
Impressions  
International Business  
Machines Corp.

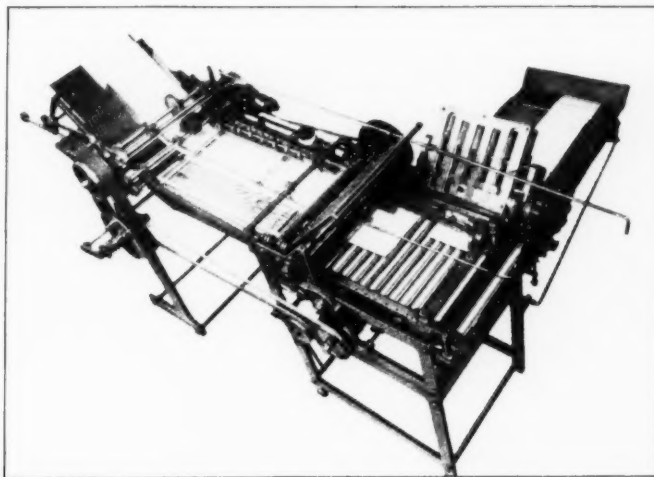
Remington  
Noiseless Typewriter  
Utilizes Remtico  
Carbon Ribbon,  
for Clarity and  
Sharpness in Copy  
Remington Rand, Inc.



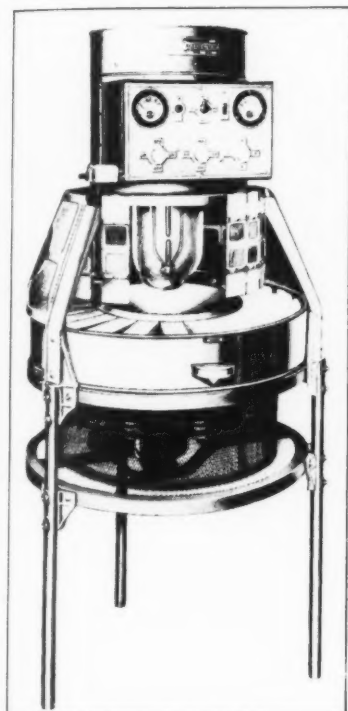




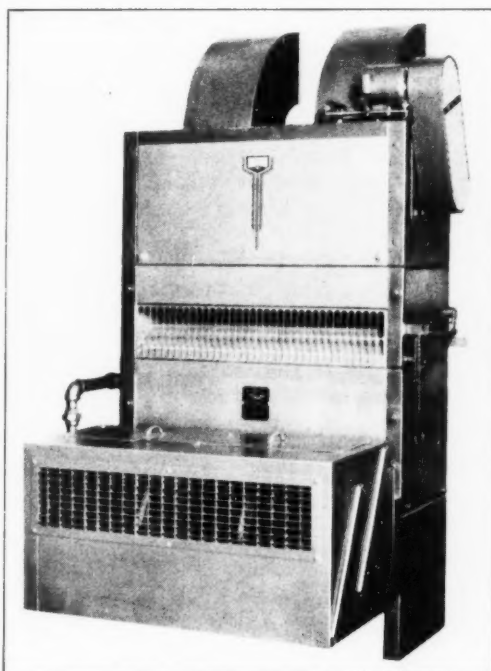
Robinson Lithographers' Rotary Cutter  
John T. Robinson Co.



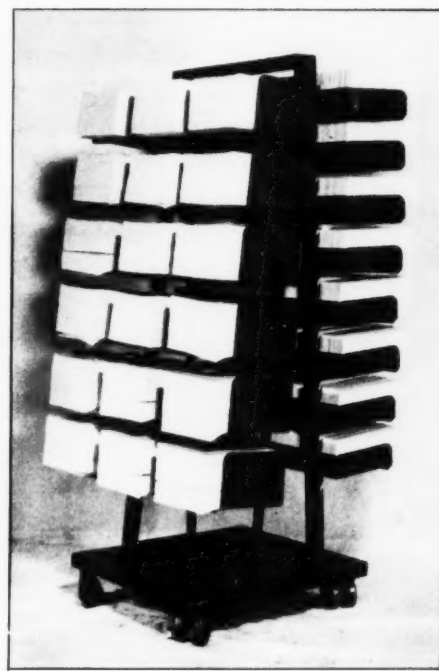
Baum New Automatic Folder, Precision Built  
Sixty Styles of Folds  
Russell Ernest Baum



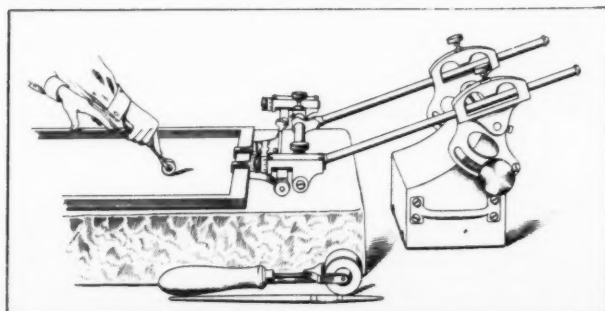
Atlas Fade-O-Meter for  
Testing Density of Inks  
and Paper  
Atlas Electric Devices Co.



Carrier Industrial Weathermaker  
for improving Atmospheric Conditions  
in Printing Plants  
Carrier Corporation



Turner Heavy Duty Conveyor  
The Turner Typefounders Co.



Ben Day  
Holdfast Apparatus  
for Laying Film Tint  
on Drawing  
Ben Day, Inc.



# THE PHOTO-LITHOGRAPHER'S MANUAL

The Photo-Lithographer's Manual is now ready for distribution. You should place this volume in the hands of your key men. Here is a peek at its editorial content.

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Selling on Price or Quality Basis

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Ink Supplies, Selecting  
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Dot Etching  
Technical Details of Reproductive  
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Deep Etch Methods, Presentation of  
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Rubber Blankets for the Offset  
Press  
Rubber Rollers  
Rollers for Photo-Lithography  
Press, Operating a Hoe

### MANAGEMENT

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Laying Out a Two-Press Plant  
Depreciation, Know Your

Paper and the Photo-Lithographic  
Industry  
Paper Calculator  
Scheduling Work Through a Plant  
Glossary of Terms

THE PHOTO-LITHOGRAPHER'S MANUAL, 1776 Broadway, New York  
\$4.00 per copy. More than three copies to a firm at special discount.

You may send us ..... copies of the Manual.

FIRM .....

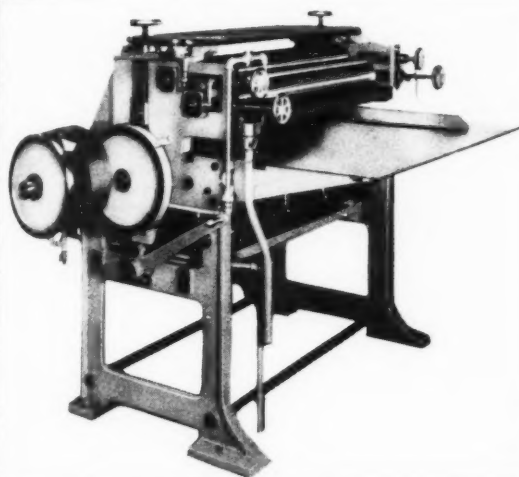
We enclose \$..... less 5% for payment with order.

ADDRESS .....

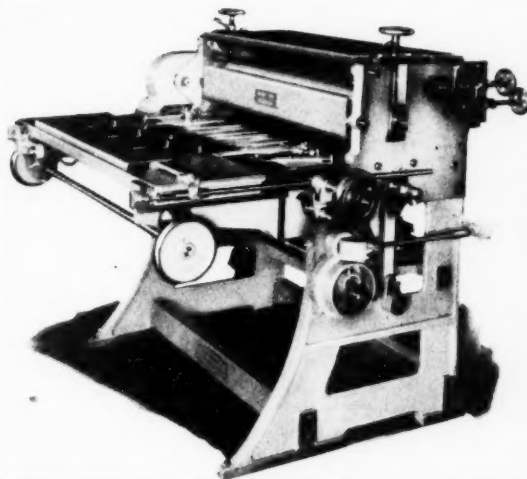
You may send ..... copies C. O. D.

You may send ..... copies on five days approval

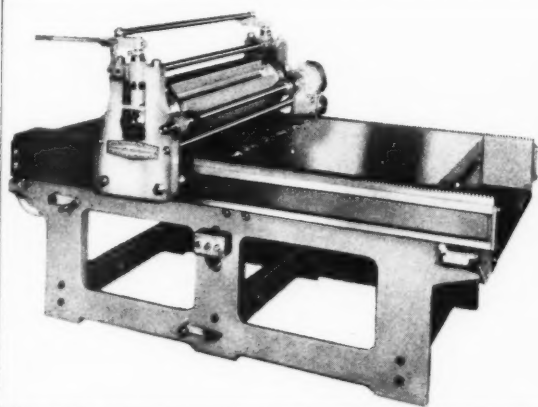
AUTHORIZED BY .....



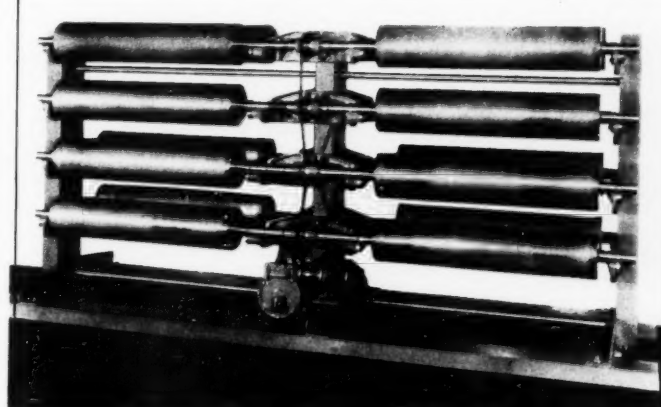
Improved Coating  
and Varnishing  
Machine  
Charles Wagner  
Litho Machinery  
Co.



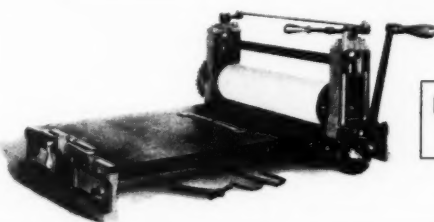
Improved Hormel  
Magnetic Spot  
Coating Machine  
Charles Wagner  
Litho Machinery  
Co.



Offset Proofing Press,  
Power Driven  
Charles Wagner  
Litho Machinery Co.



Automatic Revolving Machine  
for Composition Rollers  
Charles Wagner Litho Machinery Co.

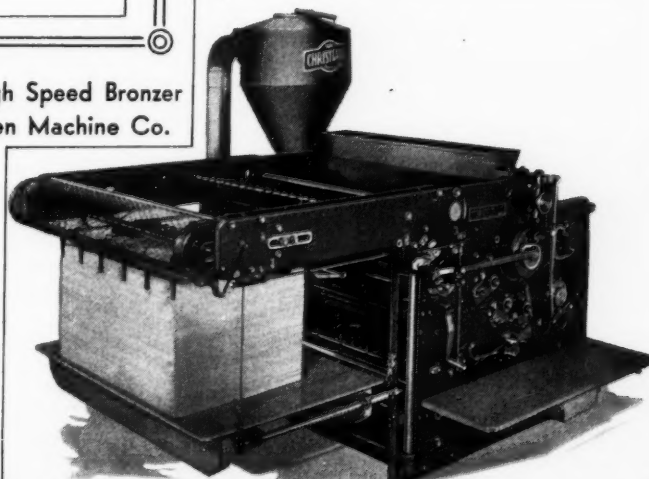


Improved Hand Press for Offset and Direct Printing  
Charles Wagner Litho Machinery Co.



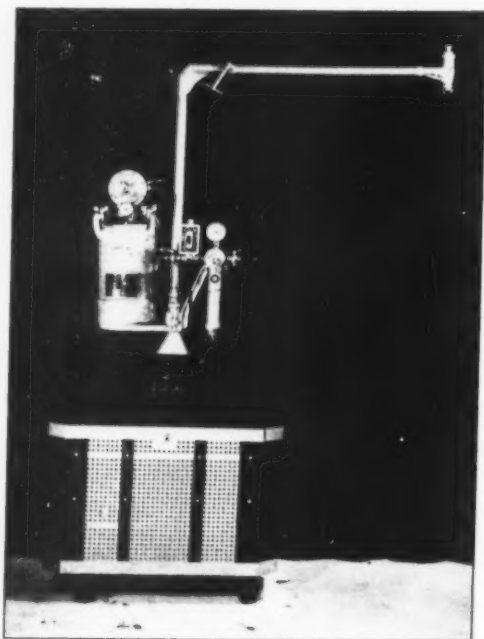
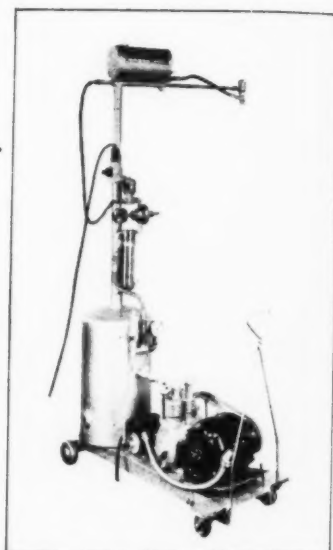
Christensen High Speed Bronzer  
The Christensen Machine Co.

Krause  
Continuous  
Die Cutter  
Karl Krause  
U. S. Corp.

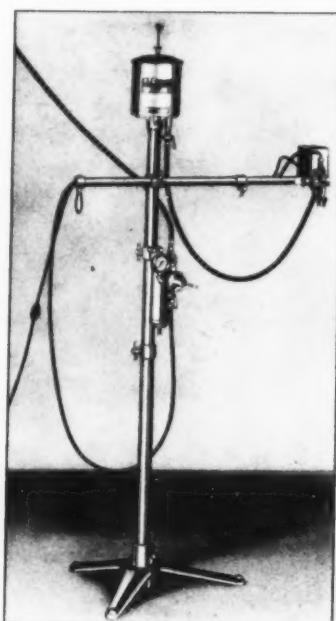


# SPRAY GUN EQUIPMENT

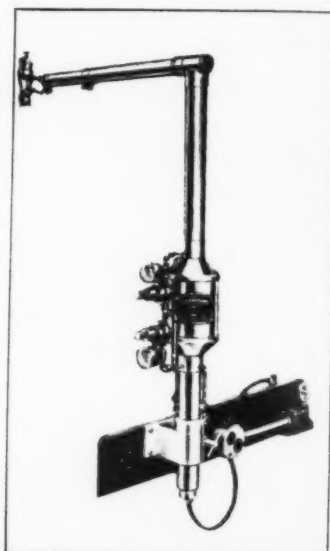
Paasche  
No-Offset  
Spraying Unit  
Paasche  
Air Brush Co., Inc.



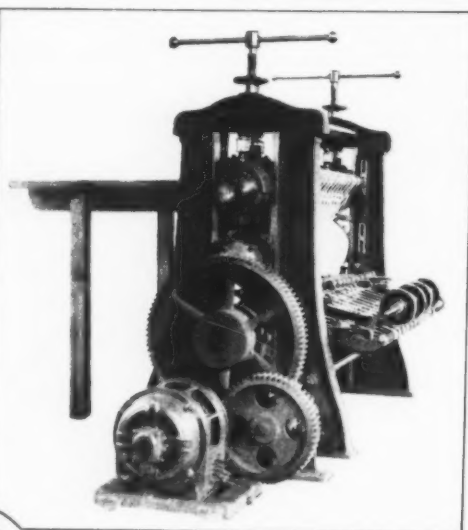
De Vilbiss Portable Anti-Offset Gun  
Requires very little floor space  
The De Vilbiss Co.



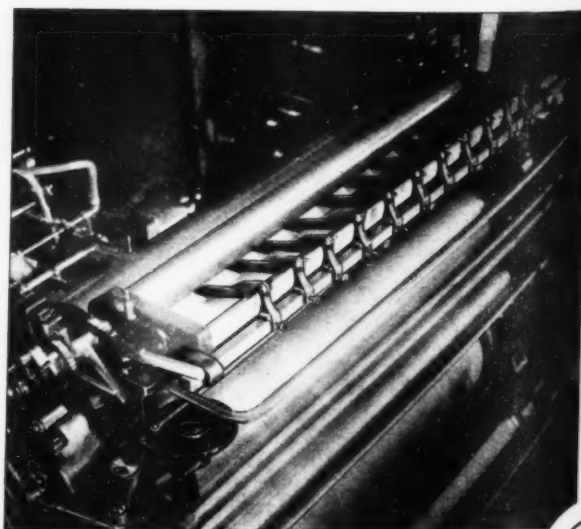
A. T. F. Non-Offset Gun  
Portable Model Adjustable  
to any Press  
American Type Founders  
Sales Corp.



Cleanprint  
Single Portable  
Spray Unit  
Cleanprint, Incorporated



Holyoke  
Three Roll  
Burnishing Calander  
Holyoke Machinery Co.



Ortleb  
Ink Agitator  
for Offset Press  
Ortleb Machinery Co.







# *Proofs*—WITHOUT AN APOLOGY

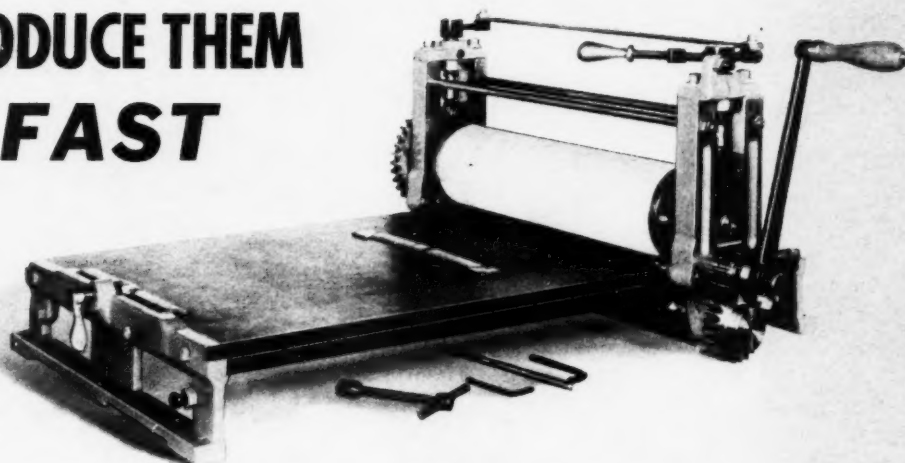
## THESE PRESSES PRODUCE THEM **CLEAN AND FAST**

This press is especially adaptable for making proofs, transfers, sketches, engravings, music, drawings, circulars, notes, testing colors, and numerous commercial uses.

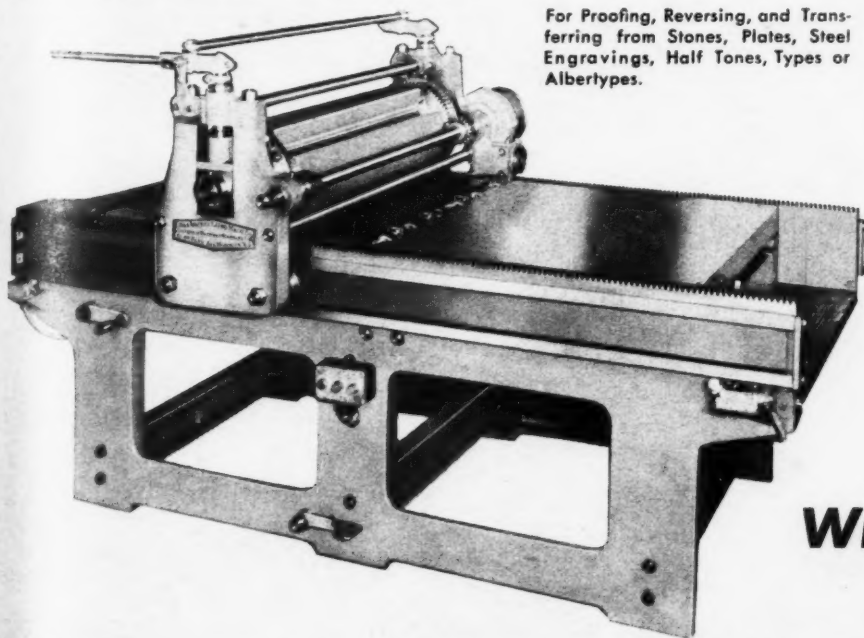
Machine is simple, easy to operate, light and rapid worker, producing a positively clean impression. The construction is similar to our regular line of Offset Proving Presses but can only be used for plate work.

This little machine is of solid construction and can be set on a bench or table—thus ready for operation at all times.

Made in two printing sizes—12" x 16" and 14" x 21".



For Proofing, Reversing, and Transferring from Stones, Plates, Steel Engravings, Half Tones, Types or Albetypes.



This machine is precision built throughout—with specially designed base of extra sturdy construction and completely balanced. The Motor Arrangement on the side of the press is of a new improved type eliminating all possibility of vibration. Machine is free on top so that impression on cylinder is ALWAYS VISIBLE to the operator.

The Printing Bed being adjustable will accommodate up to four inches in thickness and is equipped with a dependable clamping device for plates. The Stationary Bed has a Special Gripper Arrangement which positively holds the sheet, also equipped with our latest streamlined type FRONT AND SIDE GAGES.

**Write for Particulars**

## **CHARLES WAGNER LITHO MACHINERY CO.**

Division of NATIONAL-STANDARD CO., Niles, Michigan

51-55 PARK AVENUE

HOBOKEN, N. J.

*The Burning Question*  
*is NOT "whether the*  
**MERCURY**  
**EBONITE**  
NON-STRIP  
**ROLLERS**  
*will benefit*  
*My Business"*



*but—"How Soon*  
*will I Avail Myself*  
*of Their Benefits"*

**RAPID ROLLER**  
**COMPANY**

M. RAPPORT, President

Federal at Twenty-sixth Street • Chicago



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## No Salesman is a Bore

(Continued from page 80)

when you look inside it, merely means waking up and seeing and liking the things that are going on around you, and asking questions about them."

"And remembering the answers," another added. "My men sell a service to bankers. They have to know banking, and know it mighty thoroughly. They are dealing with a very busy type of man who has little time for small-talk. But no salesman of mine would start out in the morning during September without knowing what was going on in the World Series. No more than he'd neglect to notice what the SEC was doing. He might never encounter a baseball fan in a banker's office. But if a banker made a reference to the Series and a salesman merely shrugged his shoulder in disdain, he'd be throwing away a golden opportunity to bind that banker to him with a steel chain."

"We try to gather around us only mature men," said another. "Our product requires a type of man who has a deep sense of responsibility. He might do a prospect untold harm by an ill-advised sale. He's practically a technician. The reason I mention it is to show why, when a smart looking youngster, only a year or two out of school, came in for a job I knew I was going to have to turn him down. In fact, I'd done it so often to youngsters that I'd fallen into a sort of routine. It begins: 'Our men aren't really salesmen, young man. They're executives, and—' But I never got started."

"Somehow that youngster discovered in the first few minutes that I had a hobby. I collect first editions. I had one lying on my desk. The youngster leaned forward and picked it up with a reverent hand. I'd have broken the wrist of the average man who had reached for it. I don't know how he got it so quick, but he did, and he had me feeling quite comfortable about it before I had time to get uneasy. Fifteen minutes later I woke up to the fact that I, a damn busy businessman, was talking first editions with a young whippersnapper who had come looking for a job—in office hours! Not only that; the kid knew practically nothing about first editions. It's just that he was so interested, so eager to learn, and I felt so eager to teach him."

"How long has he been working for you?" someone asked.

"Six years, and—Say. I didn't tell you I hired him! Oh. Well, sure. He sold *me* the idea of hiring him. And I knew he could sell our service."

From there, the discussion went into the "I remember the time" cycle, and we tiptoed out to leave those old-timers with their reminiscences. But the single thought that stood out, when we had thought the whole discussion over was this. A good salesman is never a bore. Why? Because he talks *our* language, and *our* language is the most interesting language in the world—to us.

SEPTEMBER 1937

## Have You Tried...

# CRYSTAL OFFSET

- A beautiful, opaque grade, clean, smooth and flat. Surface sized and with just the right moisture content to prevent wrinkles and stretch. White and india in all sizes and weights. Also fancy finishes.

Large stocks on hand for immediate delivery; special orders made quickly. Samples and dummies cheerfully supplied.

---

## LEARN TO TRY US FIRST

---

## ROYAL PAPER CORP.

*formerly* ROYAL CARD & PAPER CO.

ELEVENTH AVENUE AND 25th STREET  
NEW YORK



Our Envelope Manufacturing Department will supply quickly and economically any style of envelope from any stock to go with mailing pieces. Samples and prices cheerfully submitted.

# ■ **ASK THE MAN WHO BUYS YOUR CHEMICALS TO MAKE THIS ANNUAL CHECK-UP**

## ■ IF YOU MADE CHEMICALS—

You would likely get out a catalog now and then as we do—

And you would want to know if it reached the man who is supposed to use it.

That is why we ask this simple check-up—

Look around your desk. Do you have our Catalog, entitled "Chemicals for the Graphic Arts" [1937]?

If so, will you arrange a regular place for it if you haven't already done so, so that it will be at your finger tips when you need chemicals.

If you haven't the catalog, write us for it. Before writing your letter, however, think over your needs. Don't you need something that is contained in the list on the opposite page? Let us have your order.

This check up takes but a minute or two a year, and it will insure you the excellent facilities of the Mallinckrodt Plant and a complete line of Lithographic Chemicals from A to Z when you need them.

## ■ MALLINCKRODT CHEMICAL WORKS

**IMPORTANT  
ENOUGH TO  
JUSTIFY THE  
FEW MINUTES . . . .**

■ SEE OPPOSITE PAGE

## **The Firing Squad in Advertising**

*(Continued from page 50)*

line, the copy, and the illustration. The copy, in most cases, carries the responsibility of getting direct results.

Organized appearance helps an ad. If the reader glances at an ad and gets the impression that he would have to do considerable searching to find out what it means, he won't bother. If the ad looks neat, simple and direct, he'll read it almost without realizing it, and be at the mercy of the persuasiveness of the copy writer.

Simplification is rapidly getting the recognition it deserves. A simple ad tells its story in as few words as possible. "The Pause That Refreshes" is a novel in four words. Backed by a picture of a cool looking woman having herself the pause that refreshes, it gets action.

Directness sells. The "You, too, can have a perfect nose" advertisement is certainly direct enough. It goes straight from the advertiser's shelves to the reader's pocket without any confusing detours.

Pride in workmanship will result in a better ad and a lower cost in time and effort.

Perhaps the most frequently overlooked item on any list of standards is the idea of a style or a characteristic that identifies that advertiser. If you riffle the pages of a magazine without actually seeing the wording of any advertisement, you can still identify a surprisingly large number of many. Dodge's odd-shaped typeface, Wrigley's wide arrow and distinguishable greens and reds, and many another remind the reader constantly of the advertiser. The creation of a "family resemblance" in each ad will get marginal results.

Illustration, headlines and type are the three ingredients that must do the work. Illustration has three jobs to do. It must tell a story consistent with the reading matter, be decorative enough to draw the eye, and be consistent and germane to the product.

Headlines also have three jobs. They must be easily read, should be a part of the design of the advertising piece, and enhance the character of the ad by their style.

Type must be selected to fit the advertisement—as a rugged type to advertise a rugged product, and fragile type to advertise a delicate idea. The type must be smartly spaced for easy reading, and planned to draw the eye in a straight line from the headline, through the body, to the close.

Thus an advertisement, properly planned and executed, will attract attention, appeal, be clear, cause itself to be read, and, when it has been read, cause the reader to act or react favorably toward the sponsor or his product.

And an advertising campaign, properly planned and executed, will appear in the medium which will reach the most logical prospects for the price, tell a continued story about the company or its product, or both, keep before the prospect the thing advertised, and create a steady and profitable business for the sponsor.

**THE PHOTO-LITHOGRAPHER**



## GOOD ROLLERS

(Continued from page 45)

### 10. Not affected by atmospheric conditions

Relative to humidity conditions and various changes of seasonal temperatures of the year such as from extremely hot, mucky, summer days to extremely cold, dry, winter days, a lithographic roller should not be affected by these conditions and should produce high grade lithographic work irrespective of these various changes. From this we can see that the roller manufacturer is up against some pretty difficult problems. Each reputable manufacturer is doing his best to deliver new rollers as close as possible to these specifications. It is up to the lithographer to cooperate by taking care of his rollers.

1. The most important rule in the care of rollers is cleanliness. They should be clean at all times. It is necessary to get below the surface when washing. This is not particularly easy when washing machines are used and speed is demanded, but a little extra time in washing will prove helpful and economical later on. Use the correct cleaner, preferably the one recommended by the roller manufacturer. Do not use turpentine which has a disintegrating effect on the roller. There are good liquid solvents on the market and there is also a paste which can be used to good advantage on either a vulcanized oil roller or a rubber roller.

2. The rollers should be set to a very light contact. Heavy setting results in poor work, destroys the roller and, in the case of form rollers, causes excessive wear on the plate. Pressure should be removed at the end of each run.

3. Use a minimum of drier in the ink.

4. Do not let rollers stand soaked with oil.

5. Keep in a cool dark place when not in use.

With care the rollers which are purchased today from reputable manufacturers will last long and produce good work. The lithographer may be assured that he is receiving the best that modern science and research can provide.

## Determining the Choice of Equipment

(Continued from page 54)

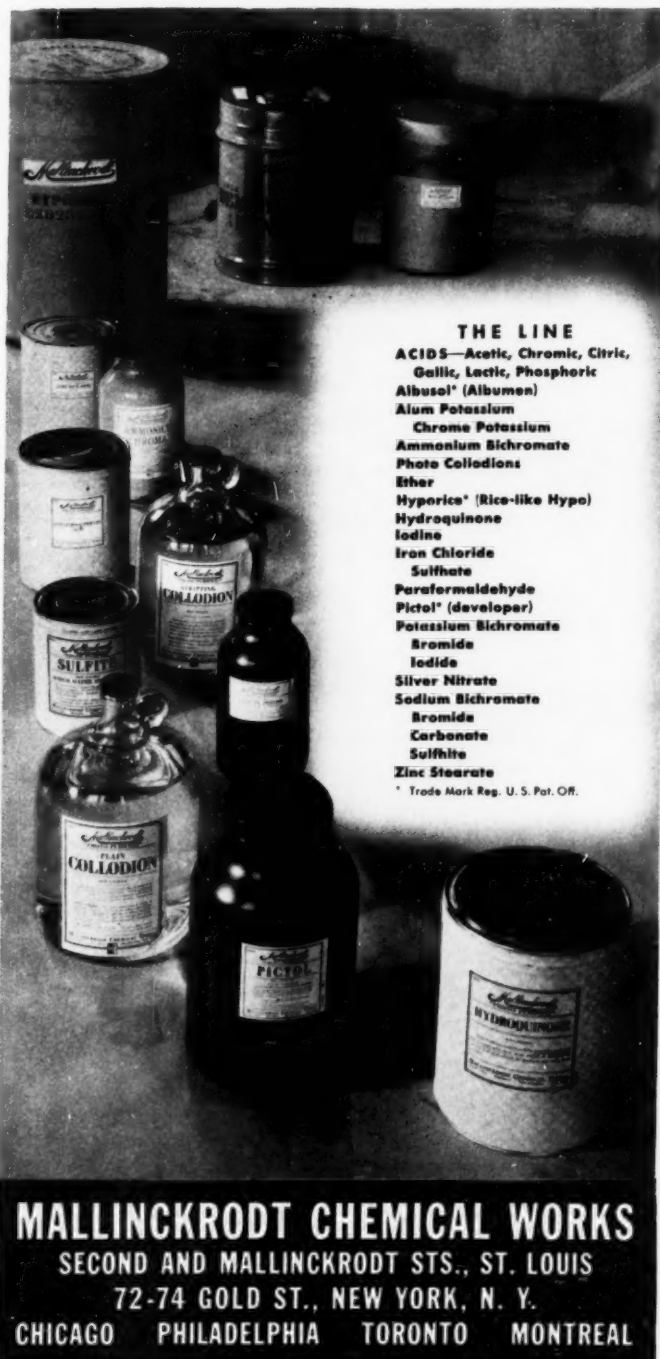
a strong position, for as his business grows he may fill out his requirements instead of using his earnings to replace equipment which has quickly worn out. The lithographer with little capital should also look with suspicion on firms which offer him unfair or unusually long terms of payment. There is generally a nigger in the woodpile.

What equipment shall I buy? That question is still unanswered. It cannot be conclusively answered here. The lithographer should listen carefully to the representatives of each firm he is considering. He should see the equipment in operation. He should ask the opinion of several friends in the industry who have requirements similar to his own. Only after careful consideration of every angle is the lithographer ready to purchase his equipment.

SEPTEMBER 1937

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- Iodine
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- Sulfate
- Paraformaldehyde
- Pictol\* (developer)
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## The Salesman and the Cerberus

(Continued from page 56)

could walk right in without any fuss with the reception desk, she simply turns him away and has a quiet chuckle to herself.

But that's enough "inside stuff." Here are a few pointers, suggested by receptionists themselves:

Approach a receptionist with a smile, recognizing her as a human being who is doing a job under orders. Tell her you are a salesman; name your company; give your name; say whom you want to see and ask her if she can arrange an interview for you. Frequently she can. If she can she will, because her support is invariably enlisted on the side of a fellow worker.

If she cannot, she'll say so. But if you have made a friend of her, she may say, "If you'll talk to Mr. Tempo, his assistant, Mr. Tempo may be able to get you in. He's nice. Shall I ring him?"

Never, never scorn the receptionist's suggestion. Usually it's smart to take it, especially if you are going to have to call back at that office again. If it seems unwise of you to see Mr. Tempo, the assistant, tell her so, and tell her why. If you say, "What I've got to sell has already been turned down in a letter from Mr. Tempo. He thought he was doing his job, of course. But I honestly believe the boss would like to hear about it."

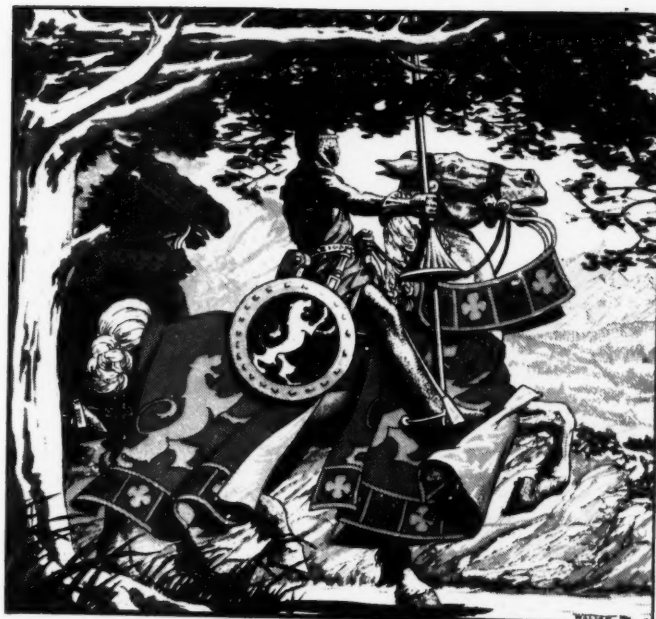
The young lady will frequently consider that, find it reasonable, and then say, "Well, Mr. Tempo goes to lunch at 12. I'll try the boss then, if you want to call back."

Don't overlook the fact of the receptionist's curiosity. She wants to know who's trying to get in and why as much to satisfy her own interest in what's going on as to justify her job.

Approaches like, "What do you think are the chances of getting someone to look at these plans?" or "See what you can do about getting me in to see Mr. Sims" are good sound policies.

Be as important as you like with the big-shot. To his receptionist be just an ordinary mortal with a burning desire to get inside the office. Any vestige of inferiority complex she may feel at being stuck out front is soothed by stacking the "important" salesmen in long still rows of frustration. That same inferiority complex will enlist her on your side to help a lowly worker like herself get around the big-shots inside, if it's properly done.

Get them to remember your name. "Smith, a nice easy one." Or "Glassadonk, how d'ya like THAT for a name to carry around?" Or "Taylor, just like the man I'm trying to see. No relation, though, worse luck." Those little businesses make your name stick; and if she remembers it, she'll feel friendly toward you. And if you come back, and she says, "Good morning, Mr. Smith," it won't do a particle of harm to grin and say, "Nice going. Think I can see the president this morning?"



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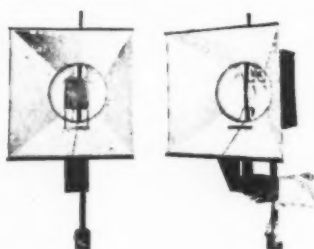
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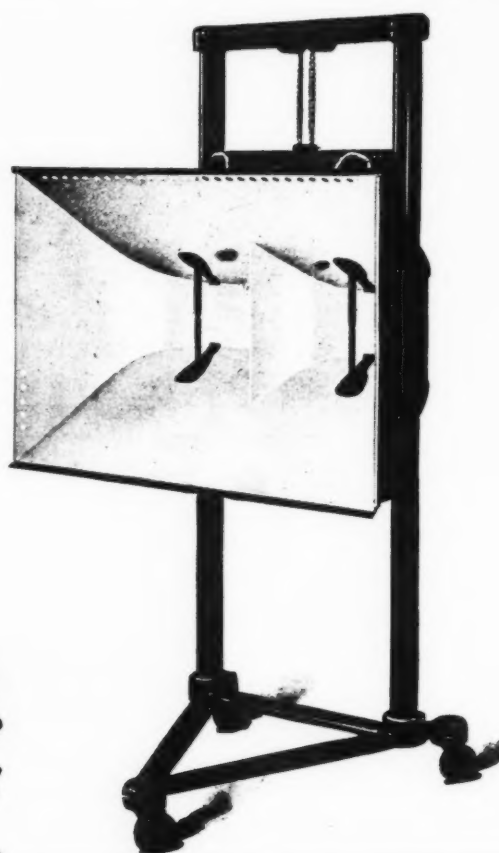
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## Convention Speaker

Harry Arthur Hopf, Managing Partner of Hopf, Kent, Willard & Company, management engineers and accountants, will deliver an address at the Cleveland Convention entitled "Maintaining Profits Through Better Management."

Mr. Hopf has long been recognized both in this country and abroad as a leader in the field of management. For more than twenty-five years he has devoted his time and study to the solution of problems in this field. He has served several hundred business concerns as an adviser on matters of organization, industrial relations, executive control, compensation and other major phases of management.



Harry Arthur Hopf

Mr. Hopf is the author of many papers in the management field and has been a lecturer in management both at New York University and Columbia University. He holds a number of important degrees. As Deputy President of the International Committee of Scientific Management, Mr. Hopf is charged with the responsibility of planning the Seventh International Management Congress in which twenty or more foreign countries will participate. This conference is to be held in Washington in September 1938.

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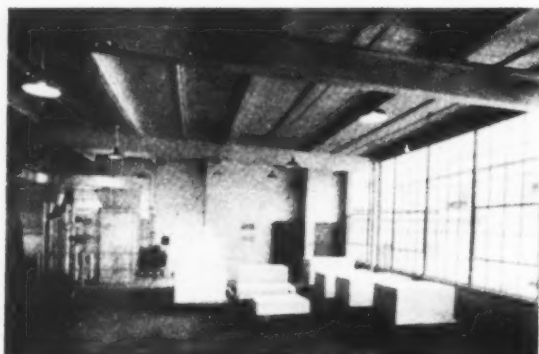
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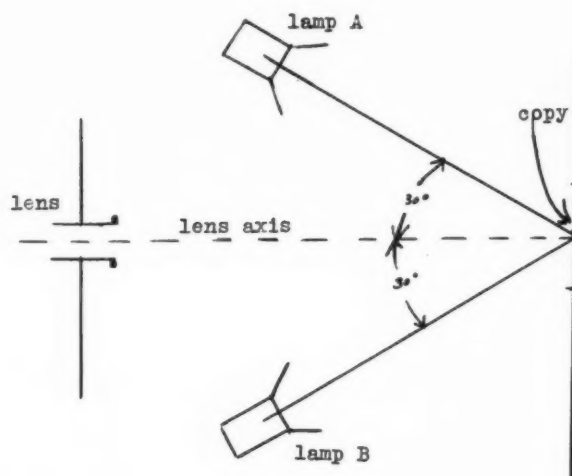
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## Photo-Offset Camera Operations

(Continued from page 41)



Position for Lens and Copy

sitized) emulsion or panchromatic (yellow, orange and red sensitized) emulsion is to be utilized to produce a suitable negative.

Although the general claim is true, that any kind of a copy can be photographed and reproduced by photo-offset methods, it is safer to say that only good sharp copy should be secured preferably in black and white.

### General Camera Operations.

Each original or set of originals which are to be reproduced at one size should be plainly marked for size of reproduction, whether it is reduction or enlargement. Unless the original is so marked, the photographer should secure the proper information before attempting to begin operations.

If job envelopes are used, complete information with regard to dimensions should be shown on a ticket attached to the envelope. The following diagram illustrates the form of job envelope, which includes most of the necessary information

To the photographer, work size is the most important dimension. This is considered in linear inches, with both the length and the width indicated.

When just one dimension is given, the other dimension should be found on the ground glass of the camera and checked with the page size and the margin required on the finished page. In the event that one of the dimensions of the image on the ground glass is correct as specified on the job ticket, and the other dimension of the work is greater than the margin allows, the size of the total image will have to be reduced. By exercising care when size is the factor, many make-overs can be avoided and much waste eliminated.

Much of the photographer's time can be saved if the sizes are calculated for him. This can be done simply by

**THE PHOTO-LITHOGRAPHER**

using a logarithmic scale, as shown in the accompanying diagram.

The original is now placed in a vertical position directly in the center of the copy board of the camera. The lamps are placed at a height opposite the center of the original and at a sufficient distance to produce even illumination of the copy. The distance of the lamps for even illumination of small copies is approximately 36 inches from the carbons to the surface of copy board and at a thirty degree angle to the axis of the lens, as shown in the accompanying diagram.

Even illumination can also be tested by holding a ruler at an angle to the copy board and comparing the shadows cast on each side of the ruler. Be certain that your body is not directly in the path of the rays of light from either of the lamps, as this would weaken the illumination on one side of the ruler and accentuate the shadow of the other lamp. When the lamps are at the proper distance and at equal angles shadows of equal intensity will result.

Focusing is the operation of obtaining a sharp image of a proper size on the ground glass, by arriving at the proper distance between the lens and the ground glass and between the lens and the copy board. This operation can be done optically with the aid of a small magnifier, for example, a linen tester. The size of the image can be judged upon the ground glass with a ruler or a narrow strip of paper marked to the correct reduction or enlargement. A transparent ruler is very useful in optical focusing, but its size must be checked frequently.

When the correct size is arrived at, the image should be carefully examined for sharpness, both at the center and at the four extreme corners. If the center of the ground glass image is sharp but the corners indistinct, the camera should be rocked back and forth until a point is reached at which the majority of the copy is sharp. Sharpness will be increased later by closing the diaphragm aperture (i. e., stopping down).

At the point of maximum sharpness the fine lines or the halftone screened illustration will be darkest and most distinct. However, if a continuous tone original is to be photographed a piece of line copy or a screened illustration can be put on the copy board with the original, just to facilitate the operation of focusing. With the type in sharp focus the continuous tone photograph will also be in sharp focus.

If the center of the ground glass includes a clear glass spot bearing a hair line cross, sharpness can be obtained on this spot by the parallax focusing method.

As a sharp negative can only be obtained after sharp focusing, this operation should be completed with extreme care and always with the aid of a magnifier.

Having obtained the proper size and sharpest focus all adjustments of the camera should be locked. The possibility of distorting the image by jarring the camera is thus eliminated.

*(Continue on page 131)*

SEPTEMBER 1937

# INK SPEAKS FOR US

## *Greetings!*

### TO THE CONVENTION VISITORS

To the members of the National Association of Photo-Lithographers, we send our greetings. We sincerely hope that this gathering together of the industry in a spirit of friendly cooperation, will result in even better business and better business relations during the months to come.

Selfishly, we are happy that the convention is being held, for we know that when lithographers get-together, they discuss the products that serve them best. We are confident that our Company will receive its full share of these unsolicited word-of-mouth recommendations.

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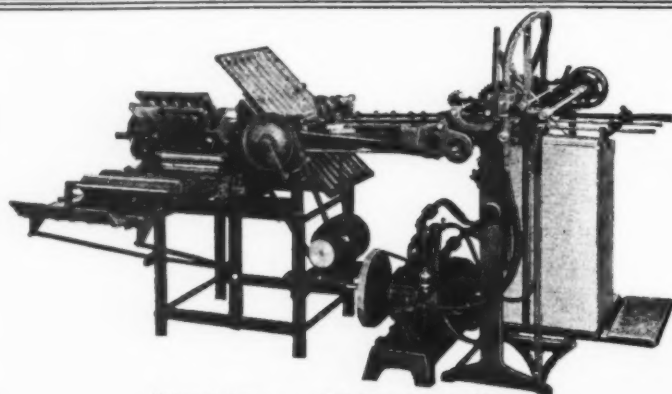
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**ENGINEERED FOR  
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(Continued from page 129)

The next operation, that of adjusting the diaphragm aperture or stop, although just a single turn of the flange on the lens, requires much experience in the choice of a particular opening, because of several controlling factors. The first of these factors is the lens itself. Most modern well constructed lenses will produce a remarkably sharp image of a moderate size original at full aperture, but old lenses will not produce a very useful result. As a matter of fact, some lenses are focused and the exposures are made with the same stop—F/32 or F/45. However, the exposures with modern lenses with full aperture are extremely short, and the fact that stopping down increases the sharpness of the image with any lens gives reason enough for this practice. Stopping down is also a method of increasing the covering power of a lens; therefore, with a large original a small aperture will produce a sharper image at the extreme corners. But, stopping down also has a limit, because beyond this limit the exposures are too long and the fine lines are thus overexposed and lost in the finished negative. The usual practice is to use a F/32 diaphragm aperture for the first trial shot, thereby obtaining a standard exposure time upon which later exposures can be calculated. Slightly better sharpness can be obtained with an F/45 aperture and consequently this aperture is used when extremely fine lines are to be photographed. Occasionally a very heavily typewritten or printed original is submitted for reproduction (with improvement if possible). Some improvement can be shown in the negative by using an F/16 or F/11 aperture and thereby picking up, with the background, some of the grayness which surrounds the type.

As the above remarks pertained mainly to black and white photography, reference must also be made to color photography. Because the greatest amount of detail in an original is best received on the sensitive medium when the proper diaphragm aperture is used, the manner in which the diaphragm aperture is chosen is highly significant. In addition the best result can only be recorded with correct exposure time. Exposures in color photography are most generally made with an F/32 or F/45 aperture. Although a filter is generally used with these apertures exposures are comparatively short because of the highly sensitized medium used in the camera.

In further papers the writer will give consideration to exposing, darkroom procedure, halftone reproduction, and color separation.

#### WANTED

Anyone knowing the whereabouts of J. Basist, proprietor of the Photo 1/2 Tone Company. If you know where Mr. Basist is located, please communicate with Box GM, THE PHOTO-LITHOGRAPHER.

SEPTEMBER 1937

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## ETCH BRUSH

**A New Device Which Improves  
Negatives and Reduces Costs**

By **PHILIP B. LUNDSTRUM**

**T**HE hundreds of dollars' worth of film that yearly goes into the scrap barrel of the average litho plant and the thousands of dollars' worth of film that yearly goes into production because the negative was "good enough," plus the labor and overhead involved in handling them, represent a serious loss not only in intrinsic material and time but in business progress. Dot etching and line etching have come very rapidly and popularly to the fore to cut this waste. Etching techniques are developed daily, and to a less and less degree must the operator suffer heartaches and the shop owner suffer cash aches as a result.

The use of etching ranges from local correction of one color half tone and line images to a tremendous field in multi-color work. In black and white work we are continually fighting for lost tones that disappeared for any one of a hundred reasons, and in color work for tones that were never there at all.

The craftsmen of Bushong and Company, Portland, Oregon, like the craftsmen throughout the trade, continually searching for new means and new techniques, experimented and developed a new device—a fountain etching brush, calling it the Etch Brush, and utilizing a new and unused principle of use, even a new adaptation of hydraulic physics.

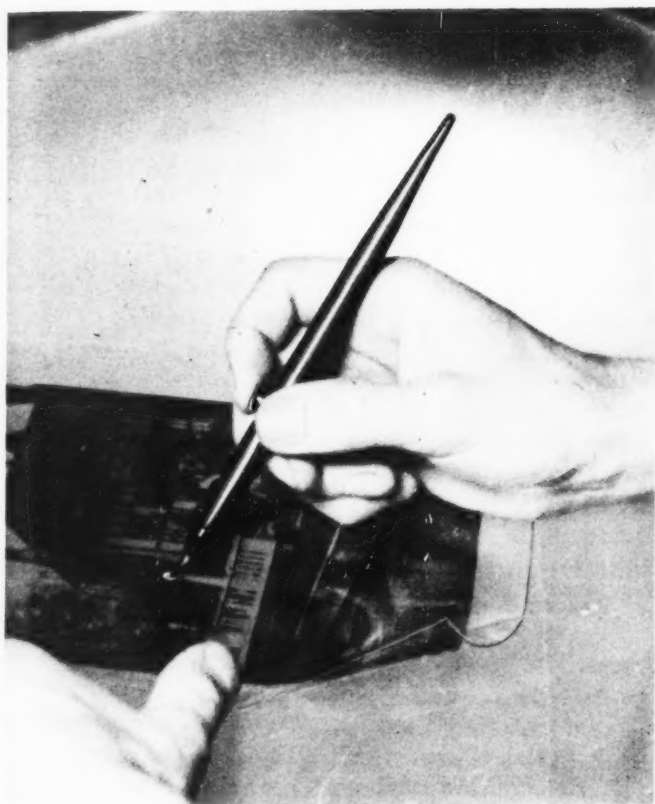
In use for many months in their own plant and found to be many times worth its extended period of development, and finding an increasing demand among their friends, basic patent claims were asked and a few of these brushes were manufactured and are now available to the trade.

Lacquer staging or its equivalent is eliminated altogether on most of the jobs, dispensing with many hours of soaking and drying, and entirely doing away with clumsy swabs, eye droppers and puddling brushes. By a simple dipping and releasing of pressure applied by a finger button on the brush handle, the brush is filled through the bristles and through a fine tube around which the bristles are molded. In operation the desired puddle of solution, ranging in size from that of the head of a pin to that of a half dollar, may be applied to an area and then retrieved by the application of the brush with the finger pressure released. For many operations it is further found to be desirable to chase the puddle around over an area. The peculiar property of the brush allows the leaving of a practically dry surface when this is done.

**THE PHOTO-LITHOGRAPHER**

When, as often happens, a few hairlines or crayon tones are burned out in small and exasperating areas of a line job, it is found that these areas may be opened up effectively in a few moments' time, leaving the dry negative almost instantly ready for production.

In times when a highlight negative is shot high enough to blast out the white background, the middle tones will be found to be too much on the highlight side. With the Etch Brush, it is possible to grey these tones down without first having to stage the background. The puddling of the reducing solution at the point of the brush, and the ability of the operator to draw the solution back up again from the negative permits close work in small areas.



The Etch Brush allows the lithographer about the same advantage in dot etching the color positive that the photo-engraver has in etching his copper half tone, whereas the engraver's etching acid works itself out in a very short time, the dot etcher's solution may be drawn back into the brush handle at will, and before the process has gone too far.

Because of the ability to flow quantities to fractions of quantities instantaneously over even small areas, a new and much greater leeway is available in shading off and fading out backgrounds.

The lithocrafters, as they call themselves, feel that much of the most recent improvement in quality lithography at Bushong's is due to their new device. Further and of equal importance is the fact that spoilage has been eliminated by an easy 50%.

SEPTEMBER 1937

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## ACCOUNTANTS

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Levess, Herbert H., C. P. A., 360 W. 23rd St., New York, N. Y.  
Reinish, Samuel S., C. P. A., 2 Lafayette St., New York, N. Y.

## ACIDS

California Ink Co., Inc., 545 Sansome St., San Francisco, Calif.  
Mallinkrodt Chemical Works, 3600 N. 2nd St., St. Louis, Mo.  
National Offset Supply Co., St. Louis, Mo.,  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

## ADDRESSING AND MAILING SERVICES

Ardlee Service, Inc., 28 W. 23 St., New York, N. Y.  
Gray, James Letter Shop, 215 E. 45th St., New York, N. Y.

## AIR CONDITIONING EQUIPMENT

Offen, B. & Co., 608 S. Dearborn St., Chicago, Ill.

## ALUMINUM PLATES

(See Plates)

## ALBUMEN

California Ink Co., Inc., 545 Sansome St., San Francisco, Calif.  
Holland, Thor, 7048 Jones Ave., N. W., Seattle, Wash.  
Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.  
Mallinkrodt Chemical Works, 3600 N. 2nd St., St. Louis, Mo.  
National Offset Supply Co., St. Louis, Mo.  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

## ALIGNING PAPER

(See Vogeltypes Paper)

## AMMONIUM DICHROMATE

Mallinkrodt Chemical Works, 3600 N. 2nd St., St. Louis, Mo.

## ARC LAMPS

(See Lamps—Arc)

## ASPHALTUM

Hilo Varnish Corporation, 42-60 Stewart Ave., Brooklyn, N. Y.  
International Printing Ink Corporation, 75 Varick St., New York, N. Y.  
National Offset Supply Co., St. Louis, Mo.  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

## ARTISTS

Hugo L. Sachs, 7 West 20th St., New York, N. Y.

## ARTISTS' SQUARES

Zoltan, John M., 833 Lyman Ave., Oak Park, Ill.

## ARTISTS' SUPPLIES

Peerless Blue Print Co., The, 347 Fifth Ave., New York, N. Y.

## BELLOWS

United Camera Co., Inc., 1515 Belmont Ave., Chicago, Ill.

## BENDAY AND SHADING MEDIUMS

(See Shading Mediums)

## BINDINGS

Plastic—Brewer—Cantelmo Co., Inc., 118 E. 27th St., New York, N. Y.  
Spiral—Spiral Binding Company, 148 Lafayette St., New York, N. Y.  
Wire-O—Trussel Mfg. Co., Poughkeepsie, N. Y.  
(See list of licensees in display advertisement)

## BLANKETS

Bainbridge, Philip M. (Goodrich Rubber Blankets), 95 Madison Avenue, New York, N. Y.  
California Ink Co., Inc., 545 Sansome St., San Francisco, Calif.  
Ideal Roller & Mfg. Co., 2512 W. 24th St., Chicago, Ill.  
International Printing Ink Corporation, 75 Varick St., New York, N. Y.  
National Offset Supply Co., St. Louis, Mo.  
Rapid Roller Co., Federal at 26th, Chicago, Ill.  
Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.  
Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.



## Fire and Toxicity Hazards

(Continued from page 31)

Chromic Acid and Dichromate poisoning usually can be avoided by rinsing the hands freely with a 10% solution of Sodium Bisulfite except in very susceptible persons. With other substances, rinsing with fresh water immediately after contact usually is sufficient.

Acid burns may be given first aid treatment by washing freely, first with water, then with a solution of baking soda (Sodium Bicarbonate) and water. Alkali burns should be rinsed, first with water, then with a 5% solution of Acetic Acid or with diluted vinegar.

Skin poisoning from Metol (Phitol, Pictol, Rhodol, Elon, etc.) is not common now that operators have become familiar with it. It should be remembered, however, that contact with photographic developers containing this chemical should not be unduly prolonged, and the hands should be rinsed thoroughly after contact.

With reference to the possibility of poisoning resulting from the inhalation of chemical fumes or dust, the normal exposure of workmen in lithographic plants is so intermittent as to cause slight risk if inhalation of the fumes of Acetone, Benzol, Carbon Disulfide, and Carbon Tetrachloride is avoided. Workmen in chemical plants must wear masks in many operations to prevent the breathing of chemical dust into the lungs. Here, however, the air is frequently charged with dust from grinding, sifting, or weighing operations, and exposure is constant. Containers of the solvents listed above should be kept tightly closed both from the viewpoints of toxic and fire hazards. If the odor of any of them becomes apparent, the room should be well ventilated at once.

In connection with fumes, it should be remembered that acid, coming in contact with Sodium or Potassium Cyanide will release Hydrocyanic Acid—the gas now used in several states to execute criminals. Never mix acids and cyanide solutions in any sink or drain.

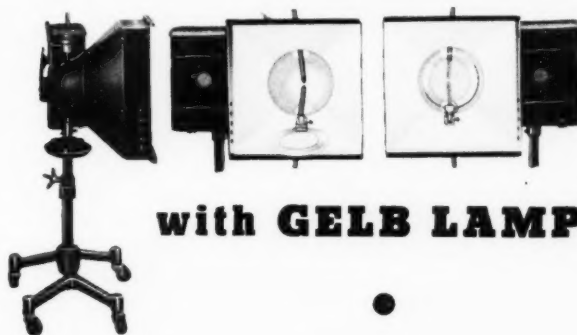
When any chemical or solution is swallowed by accident, there is only one safe rule to follow—call a physician at once. Certain first aid treatments are given in the following chart. This chart lists the principal chemicals used in lithography which are hazardous from a fire or toxic standpoint. It also indicates for each the manner in which poisoning may take place, precautions to be observed, symptoms of poisoning, and first aid treatment to be given pending arrival of a physician.

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SEPTEMBER 1937

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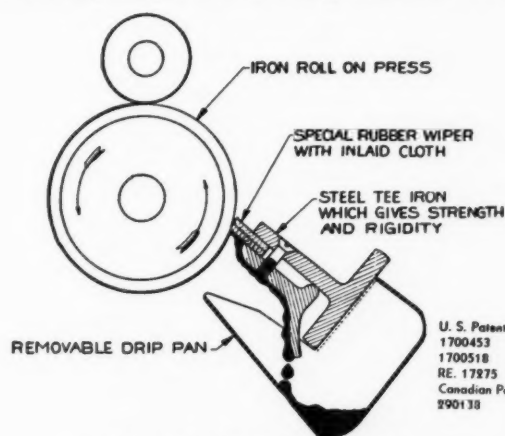
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Vulcan Proofing Co., 58th St. and First Ave., Brooklyn, N. Y.

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Eastman Kodak Co., 343 State St., Rochester, N. Y.  
Lanston Monotype Machine Co., 24th at Locust, Philadelphia, Pa.  
Levy, Max & Co., Wayne & Berkley, Philadelphia, Pa.  
Litho Equipment & Supply Co., 215 W. Ohio St., Chicago, Ill.  
Miles Machinery Co., 18 East 16th St., New York, N. Y.  
Norman-Willets Co., 318 W. Washington St., Chicago, Ill.  
Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Repro-Art Machinery Co., Wayne Ave. & Berkley St., Philadelphia, Pa.  
Robertson, R. R., 1 N. Canal St., Chicago, Ill.  
Sullebarger Co., E. T., 116 Nassau St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.  
Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.  
Zeiss, Carl, Inc., 485 Fifth Ave., New York, N. Y.

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#### **CARBON PAPER RIBBONS**

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#### **CHEMICALS**

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California Ink Co., Inc., The, 545 Sansome St., San Francisco, Calif.  
Eastman Kodak Company, Rochester, N. Y.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.  
La Motte Chemicals Products Co., 438 Light St., Baltimore, Md.  
Mallinkrodt Chemical Works, 3600 N. Second St., St. Louis, Mo.  
Mereck & Co., Inc., Rahway, N. J.  
National Offset Supply Co., St. Louis, Mo.  
Norman-Willets Co., 318 W. Washington St., Chicago, Ill.  
Phillips & Jacobs, 622 Race St., Philadelphia, Pa.  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.  
Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

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Huebner Laboratories, 202 E. 44th St., New York, N. Y.

#### **COMPOSITION**

Monsen, Thormod and Son, Inc., 740 N. Franklin St., Chicago, Ill.

#### **COMPOSING MACHINES**

Coxhead Corp., Ralph C., 17 Park Place, New York, N. Y.

#### **CRAYONS-LITHO**

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Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

#### **DAMPENING DEVICES**

Goodrich, The B. F. Co., 570 S. Main St., Akron, Ohio.  
International Press Cleaner & Mfg. Co., The, 112 E. Hamilton Ave., Cleveland, Ohio.  
Wagner, Charles, Litho Machine Co., 51 Park Ave., Hoboken, N. J.

#### **DEEP ETCH SUPPLIES**

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Robertson, R. R., 400 W. Madison St., Chicago, Ill.  
Schultz, H. J., 2230 N. Racine Ave., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

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## CHICAGO SCHOOL OF PRINTING OFFERS OFFSET COURSE

The Chicago School of Printing, which is operated by the Open Shop Employing Printers Association, announces a series of courses in offset instruction beginning the week of September 13th. The schedule is as follows:

### DAY CLASSES

Camera and Platemaking, term of 12 weeks, 5 days a week. Tuition, \$200.00.

Offset Press, term of 16 weeks, 5 days a week. Tuition, \$200.00.

### EVENING CLASSES

Camera and Platemaking, term of 20 weeks, two hour sessions, Tuesday and Thursday evenings. Tuition, \$100.00.

Offset Press, term of 20 weeks, two hour sessions, Wednesday and Friday evenings. Tuition, \$75.00.

Also offered is a lecture course on lithography consisting of twelve lectures for the fee of \$15.00.

With the exception of the lecture course, all classes are limited to twelve students. Enrollment should be made on or before September 1st.

Mrs. Minnie Harris, a leader in the woman's suffrage movement in Warren, Ohio, two decades ago, whose husband, Alfred F. Harris, is Chairman of the Board of the Harris Seybold Potter Company, died August 24th, at her residence, Hotel Alcazar, Cleveland.

Mrs. Harris was born in Warren and was active there in women's welfare and social groups for more than 25 years. She became widely known for her work in the suffrage movement. Serving as District Supervisor she received commendation from the national leaders when the movement succeeded in 1920.

Her husband and a son, Alfred Stull Harris, Vice President of the Harris Seybold Potter Company, survive.



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Sinclair & Valentine Co., 11 St. Clair Pl. New York,  
N. Y.

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Chicago, Ill.  
Northwestern Electric Co., 408 S. Hoyne, Chicago,  
Ill.  
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Francisco, Cal.  
Eastman Kodak Co., Rochester, N. Y.  
Gevaert Co. of America, Inc., The, 423 W. 55th St.,  
New York, N. Y.  
Haloid Co., The, 6 Haloid St., Rochester, N. Y.  
Hammer Dry Plate Co., Ohio Ave. & Miami St.,  
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Norman-Willets Co., 318 W. Washington St.,  
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International Printing Ink Corporation, 75 Varick  
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Lithographic Plate Graining Co., 41 Box St., Brook-  
lyn, N. Y.  
McKenna, James J., 1015 Callowhill St., Phila., Pa.  
National Offset Supply Co., 613 N. Broadway,  
St. Louis, Mo.  
Photo Litho Plate Graining Co., Inc., 1207 S. High-  
land St., Baltimore, Md.  
Reliable Lithographic Plate Co., Inc., 17 Vande-  
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cinnati, O.  
Zarkin Machine Co., 335 E. 27th St., New York,  
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Bowers Printing Ink Co., 711 W. Lake St., Chicago,  
Ill.  
Braden-Sutphin Ink Co., 1736 E. 22nd St., Cleve-  
land, Ohio  
California Ink Co., 545 Sansome St., San Francisco,  
Calif.  
Ceb Printing Ink Co., Chicago, Ill.  
Crescent Ink & Color Co. of Penn., 464 N. 5th St.,  
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Driscoll, Martin & Co., 610 Federal St., Chicago, Ill.  
Flint Ink Co., Howard, 2545 Scotten Ave., Detroit,  
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Fuchs & Lang Mfg. Co., Div. General Printing Ink  
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International Printing Ink Corp., 75 Varick St.,  
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Johnson & Co., Inc., Charles Eneu, 10th & Lombard  
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Kohl & Madden Printing Ink Co., 731 Plymouth  
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Levey Co., Inc., Frederick H., 59 Beekman St., New  
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Mayer Co., Inc., Robert, 1107 Grand St., Hoboken,  
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National Offset Supply Co., St. Louis, Mo.

Prescott Co., H. S., 470 Atlantic Ave., Boston, Mass.

Reed Roller & Supply Co., Inc., 415 Jackson St.,  
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Roberts, Inc., Lewis, 72 Union St., Newark, N. J.  
Roosen Co., H. D., Ft. 20th-21st St., Brooklyn,  
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N. Y.

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N. Y. Printers & Bookbinders Mutual Insurance  
Co., 147 Fourth Ave., New York, N. Y.

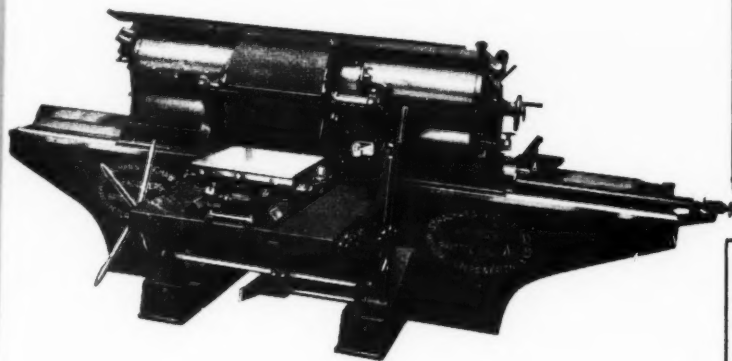
#### THE PHOTO-LITHOGRAPHER

## BRIEFS

Atlas Electric Devices Co., Chicago, manufacturer of the Fade-Ometer and Weather-Ometer has added 12,000 square feet to its plant and installed additional equipment. The greatly increased demand for accelerated laboratory testing equipment for textiles, dyestuffs, inks, paints, asphalts and other materials necessitated this enlargement of manufacturing facilities.

Philip A. Hunt Company, Brooklyn, N. Y., has opened a branch office and warehouse at 111 Binney Street, Cambridge, Mass., from which to service New England accounts.

Strachan & Henshaw, Ltd., Bristol, England, have developed a mechanical machine for stepping up litho originals onto press plates. The caliber of the plates prepared on this mechanical transfer press are in every way comparable to the best of those produced by other methods.



Mr. Kauno A. Lehto, manager of their American division (Strachan & Henshaw Co., Ltd.), recently was quoted to have said, "Our biggest problem today is not so much to prove the capabilities of our multi transferring machine, but to try and convince the American lithographer that the principle used is by far the simplest and easiest method that could be devised for accurate and high speed litho plate preparation. The grade of work produced from plates prepared on our unit is of the highest type, perfectly true, line for line, and dot for dot."

The manufacturer claims that one of the distinct advantages of this mechanical method of plate preparation is that the image is transferred from the original into the clean grain of the press plate, it being used exactly the way it comes from the graining machine, no albumen coating being required. Plates thus prepared have stood up well over 100,000 impressions without showing marked wear. Any size press plate may be prepared up to 64" x 44". The finest halftones are transferred as easily as heavy solids—solids require little, if any, touching up. Dead register can be guaranteed.

SEPTEMBER 1937



### *Equipment for* **PRINTERS • BOOKBINDERS • LITHOGRAPHERS**

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## LAMPS, ARC

Atlas Electric Devices Co., Inc., 361 W. Superior St., Chicago, Ill.  
Gelb Co., Joseph, 250 W. 54th St., New York, N. Y.  
Macbeth Arc Lamp Co., 875 N. 28th St., Phila., Pa.  
Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.  
Pease Co., C. F., The, 809 N. Franklin St., Chicago, Ill.  
Sullebarger Co., E. T., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

## LENSES

Bausch & Lomb Optical Co., 140 Smith St., Rochester, N. Y.  
Goerz American Optical Co., C. P., 317 E. 34th St., New York, N. Y.  
Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.  
Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.  
Zeiss, Carl, Inc., 485 Fifth Ave., New York, N. Y.

## LINE-UP AND REGISTER MACHINES, SYSTEMS AND TABLES

Craftsmen Line-Up Table Corp., 49 River St., Waltham, Mass.  
Hamilton Mfg. Co., Inc., 1315 18th St., Two Rivers, Wis.  
Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.  
Miles Machinery Co., 18 E. 16th St., New York, N. Y.  
Robertson, R. R., 400 W. Madison St., Chicago, Ill.  
Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., & Scranton, Pa.

## LITHO DEVELOPING INK

International Printing Ink Corporation, 75 Varick St., New York, N. Y.  
Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

## LITHO ENGRAVING AND DRAWINGS

Litho Trade Service Studio, 538 S. Clark St., Chicago, Ill.

## LITHOGRAPHIC EQUIPMENT DISTRIBUTORS

Heuslein, R. J., Co., 11 S. Meridian St., Indianapolis, Ind.

## MACHINISTS

Gegenheimer, Inc., Wm., 78 Roebling St., Brooklyn, N. Y.

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.  
Rathbun & Bird Co., Inc., 85 Grand St., New York, N. Y.

## MAGNIFYING AND REDUCING GLASSES

Bausch & Lomb Optical Co., 635 St. Paul St., Rochester, N. Y.  
Norman-Willets Co., 318 W. Washington St., Chicago, Ill.  
Repro-Art Machinery Co., Wayne Ave. & Berkeley St., Phila., Pa.  
Zeiss, Inc., Carl, 485 Fifth Ave., New York, N. Y.

## MAKE-UP TABLES

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.  
Miles Machinery Co., 18 E. 16th St., New York, N. Y.  
Robertson, R. R., 400 W. Madison St., Chicago, Ill.  
Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

## MOLESKIN AND MOLLETON

International Printing Ink Corporation, 75 Varick St., New York, N. Y.  
McKinley Litho Supply Co., 1600 John St., Cincinnati, Ohio  
Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.  
Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.  
Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

## MOTORS AND CONTROLLERS

Cline Electric Mfg. Co., 211 W. Wacker Drive, Chicago, Ill.

## NEGATIVE MATERIALS

Agfa Ansco Corp., Binghamton, N. Y.  
Cramer Dry Plate Co., G., Lemp & Shenandoah Ave., St. Louis, Mo.  
Eastman Kodak Company, Rochester, N. Y.  
Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.  
Haloid Co., The, 6 Haloid St., Rochester, N. Y.  
Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.  
Norman-Willets Co., 318 W. Washington St., Chicago, Ill.  
Polygraphic Company of America, Inc., 310 E. 45th St., New York, N. Y.

## OFFSET PLATE MAKING SERVICE

(See Plate Making Service)

## THE PHOTO-LITHOGRAPHER

"Tracing Alphabets," a new "tool" for layout artists, has recently been printed and published by John C. Meyer & Son, Philadelphia Typographers. Recognizing the fact that many typographic problems start at the layout man's drawing board, this noteworthy reference book was designed to simplify the artist's job—hoping to make layouts faster, neater, and above all, more accurate.

"Every day, typographers get layouts that are almost impossible to follow," stated Mr. Arthur Meyer, President of John C. Meyer & Son, in explaining the purpose of the book. "This Tracing Alphabet guide will eliminate those costly, inaccurate layouts that cause typographers so much trouble—not to mention the customer. By tracing exactly the type face and size you want—from the book—you can't make the common mistakes of drawing letters too thin, tall or short."

The book is equally helpful to the novice in layout work as to the professional artist. It is so easy to use that even a comparatively inexperienced person can make neat, precise layouts and dummies.

All type faces and sizes shown are available from any first class typographic houses—no costly and troublesome "blow-ups" are necessary. Complete alphabets are shown, with all figures and punctuation marks. As new type faces are designed, it is planned to make available new pages for the book.

**George W. Millar & Company**, at a meeting held August 10th, 1937, elected James F. Levens to succeed the late J. C. Mallalieu as president. Mr. Levens has been with the Millar organization for over 35 years and hitherto a vice president of the corporation.

The firm of Geo. W. Millar & Company, founded in 1860 and incorporated in 1919, is one of the oldest established merchandisers of paper, twine and paper mill supplies in New York.

**The E. J. Kelly Company**, ink maker of Kalamazoo, Michigan, has developed a new Spot Carbonizing Black for lithographers. The Kelly Company guarantees it to remain sensitive for sixty days and suggests a novel manner by which to run the new black.

**Sigmund Ullman Company**, Division of General Printing Ink Corporation, has extended its sales representation and service facilities by opening branch offices in the following cities:

Nashville, 130 Fourth Ave., North; Nashville 5-2204; J. F. Dunn, Mgr.

Milwaukee, 315 East Detroit St.; Daly 6764; John Landgraf, Mgr.

Los Angeles, 530 Stanford Ave.; Michigan 2671; Guy Sensiba, Mgr.

St. Paul, 2482 University Ave.; Nestor 2873; William C. Lawrence, Mgr.

SEPTEMBER 1937

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LINE  
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DRY PLATE  
FILM

PHOTO LAC  
NEGATIVES

PHOTO LAC  
POSITIVES

GRAINED  
GLASS  
POSITIVES

DOT ETCH  
POSITIVES

CAMERA  
POSITIVES

CONTACT  
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COLOR  
OFFSET  
PLATES  
NEW ETCHING PROCESS



PHOTO  
COMPOSED  
NEGATIVES

BEN DAY  
TINTS

STRIPPING  
ORIGINALS  
FOR  
TRANSFERRING

MACHINE  
DEEP  
ETCH  
PRESS  
PLATES

MACHINE  
ALBUMEN  
PRESS  
PLATES

BLOW UPS

MACHINE  
MULTIPLES

GLASS 2 OR 200 UP

ZINC 2 OR 1000 UP

STAMPS COUPONS

LABELS BUTTONS

PLAYING CARDS, ETC.

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Artists' Supply Co., 7610 Decker Ave., Cleveland,  
Ohio  
International Printing Ink Corporation, 75 Varick  
St., New York, N. Y.  
Okie, Francis G., 247 S. Third St., Phila., Pa.  
Senefelder Company, Inc., The, 32-34 Greene St.,  
New York, N. Y.

## PAPER

Aetna Paper Co., The, Dayton, Ohio  
American Writing Paper Co., Holyoke, Mass.  
Beckett Paper Co., The, Hamilton, Ohio  
Brown Company, Portland, Maine  
Burgess Cellulose Co. (Div. of C. F. Burgess  
Laboratories, Freeport, Ill.)  
Cantine Co., Martin, Saugerties, N. Y.  
Case & Risley Press Paper Co., Oneco, Conn.  
Champion Paper & Fibre Co., Hamilton, Ohio  
Chemical Paper Mfg. Co., Holyoke, Mass.  
Chillicothe Paper Co., The, Chillicothe, Ohio  
Consolidated Water Power & Paper Co., Wisconsin  
Rapids, Wis.  
Crocker-McElwain Co., Holyoke, Mass.  
Dill & Collins, Inc., Richmond & Tioga Sts., Phila-  
delphia, Pa.  
Falulah Paper Co., Fitchburg, Mass.  
Fraser Industries, Inc., Graybar Bldg., New York,  
N. Y.  
Hammermill Paper Co., Erie, Pa.  
Hollingsworth & Whitney Co., 140 Federal St., Bos-  
ton, Mass.  
Howard Paper Co., Urbana, Ohio  
International Paper Co., 220 E. 42nd St., New York  
City, N. Y.  
Maxwell Paper Co., Franklin, Warren County, Ohio  
Munising Paper Co., Munising, Mich.  
Neenah Paper Co., Neenah, Wis.  
Rhineland Paper Co., Rhineland, Wis.  
Riegel Paper Co., 342 Madison Ave., New York,  
City, N. Y.  
Strathmore Paper Co., W. Springfield, Mass.  
Warren, S. D. Co., 89 Broad St., Boston, Mass.  
Watervliet Paper Co., Watervliet, Mich.  
West Virginia Pulp & Paper Co., 230 Park Ave.,  
New York City, N. Y.  
Whiting Geo. A. Paper Co., Menasha, Wis.

## PAPER CONDITIONING EQUIPMENT

Advance Mfg. Co., Inc., Louisville, Ky.  
Southworth Machine Co., 30 Warren Ave., Portland,  
Maine  
Strachan & Henshaw Co., Ltd., 7th at Grange St.,  
Philadelphia, Pa.

## PAPER DISTRIBUTORS

Bulkley-Dunton & Co., 295 Madison Ave., New  
York City, N. Y.  
Forest Paper Co., Inc., 334 Hudson St., New York,  
N. Y.

Lathrop Paper Co., 155 Perry St., New York, N. Y.  
Linde Paper Co., J. E., 84 Beekman St., New York,  
N. Y.  
Marquardt & Co., Inc., 153 Spring St., New York,  
N. Y.  
Millar & Co., Inc., Geo., W., 284-290 Lafayette St.,  
New York, N. Y.  
Miller & Wright Paper Co., 200 Varick St., New  
York, N. Y.  
Royal Paper Corp., 11th Ave. & 25th St., New York,  
N. Y.

## PARAFORMALDEHYDE—U. S. P.

Hunt, Philip A., Company, 253 Russell St., Brook-  
lyn, N. Y.—2432 Lakeside Ave., Cleveland,  
Ohio—1076 W. Division St., Chicago, Ill.  
Mallinckrodt Chemical Works, 3600 N. 2nd St.,  
St. Louis, Mo.

## PHOTO COMPOSING MACHINES

Lanston Monotype Machine Co., 24th at Locust,  
Phila., Pa.  
Rutherford Machinery Co., Div. General Printing  
Ink Corp., 100 Sixth Ave., New York, N. Y.  
Strachan & Henshaw Co., Ltd., 7th at Grange St.,  
Philadelphia, Pa.  
Wesol Mfg. Co., 468 Fourth Ave., New York, N. Y.,  
and Scranton, Pa.

## PHOTO LETTERING MACHINES

Rutherford Machinery Co., Div. General Printing  
Ink Corp., 100 Sixth Ave., New York, N. Y.

## PLATE COATING EQUIPMENT

Lanston Monotype Machine Co., 24th at Locust,  
Phila., Pa.  
Wesol Mfg. Co., 468 Fourth Ave., New York, N. Y.,  
and Scranton, Pa.  
Zarkin Machine Co., 335 E. 27th St., New York,  
N. Y.

## PLATE GRAINING MACHINES

Robertson, R. R., 400 W. Madison St., Chicago, Ill.  
Wesol F. Mfg. Co., Inc., 468 Fourth Ave., New  
York, N. Y., and Scranton, Pa.  
Zarkin Machine Co., Inc., 355 E. 27th St., New  
York, N. Y.

## PLATE GRAINING MATERIALS

International Printing Ink Corporation, 75 Varick  
St., New York, N. Y.  
New England Quartz Company of New York, 450  
Seventh Avenue, New York, N. Y.  
Seibold, Inc., J. H. and G. B., 47 Watts St., New  
York, N. Y.  
Senefelder Company, Inc., The, 32-34 Greene St.,  
New York, N. Y.  
Zarkin Machine Co., Inc., 355 E. 27th St., New  
York, N. Y.

## PLATE MAKING EQUIPMENT

California Ink Co., Inc., The, 545 Sansome St., San  
Francisco, Cal.



A recent development of **International Business Machines Corporation** that is of wide interest to the photo-offset field is the International Carbon Ribbon Writing Machine which is receiving the praise of users for its strong, clear type impressions for photographic work produced with electric typing speed. The uniform clarity of these impressions for photographic reproduction masters and direct-to-plate writing cause all type characters to stand out from the page in a manner resembling fine letter-press printing.



This machine is all-electric. Every mechanical movement is electrically powered and controlled by a feather-light touch on a key. All type bars are electrically controlled and provided with the exact amount of power for ideal printing. Periods do not cut through the paper, and capitals do not print too lightly. The ribbon feed mechanism moves the carbon paper ribbon forward a full space after each type stroke, thereby giving a fresh portion of carbon for each impression.

The **Douthitt Corporation** of Detroit, Michigan, has recently developed, and is now manufacturing, a vacuum printing machine for lithographers that has a number of new features. The main feature of the machine is the central rotor by which either the blanket or glass may be used down, when preparing the print. Both blanket and glass frame when in the rotor may be revolved to place either blanket or glass in the upright position and then raised, horizontally, by pressing the electric switch for raising and lowering the frame. With the precise construction of the metal frames for the rubber blanket and glass all clamping devices are eliminated. When the glass comes in contact with the rubber moulding on the blanket it is sealed over the entire surface. It is equipped with a vacuum pump with an electric cut-out switch which may be set at any pressure desired. When the desired vacuum is reached the motor and pump automatically stop and will not start again until the vacuum is released. The motor for raising and lowering the frame is of the reversible type with a new type limit switch which automatically stops in the proper position when raising and lowering.

SEPTEMBER 1937

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 Rutherford Machinery Co. Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.  
 Strachan & Henshaw Co., Ltd., 7th at Grange St., Philadelphia, Pa.  
 Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

#### **PLATE MAKING SERVICE**

California Ink Co., Inc., 545 Sansome St., San Francisco, Calif.  
 Chicago Litho Plate Graining Co., 214 N. Clinton St., Chicago, Ill.  
 Columbia Offset & Reproduction Corp., 2 Duane St., New York, N. Y.  
 Offset Engravers Associates, Inc., 42 E. 20th St., New York, N. Y.  
 Offset Printing Plate Co. of New York, Inc., 100 Bleecker St., New York, N. Y.  
 Offset Products Corporation, 103 Lafayette St., New York, N. Y.  
 Rightmire-Berg Co., 717 S. Wells St., Chicago, Ill.  
 Swart-Reichel, Inc., 461 Eighth Ave., New York, N. Y.  
 Stevenson Photo Color Separation Co., 222 W. Fourth St., Cincinnati, Ohio

#### **PLATES—ALUMINUM, ZINC**

Aluminum Co. of America, Gulf Bldg., Pittsburg, Pa.  
 American Zinc Products Co., Greencastle, Ind.  
 Edes Mfg. Co., The, Plymouth, Mass.  
 International Printing Ink Corporation, 75 Varick St., New York, N. Y.  
 Lithographic Plate Graining Co., 41 Box St., Brooklyn, N. Y.  
 Matthiessen & Hegeler Zinc Co., Ninth St., LaSalle, Ill.  
 National Litho Plate Co., The, 35 Meadow St., Brooklyn, N. Y.  
 National Offset Supply Co., St. Louis, Mo.  
 Photo-Litho Plate Graining Co., Inc., 1207 S. Highland St., Baltimore, Md.  
 Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.  
 Reliable Lithographic Plate Co., Inc., 17 Vandewater St., New York, N. Y.  
 Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

#### **PLATES—DRY**

Eastman Kodak Company, Rochester, N. Y.  
 Gevaert Co. of America, Inc., The, 423 W. 55th St., New York, N. Y.  
 Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.  
 Polygraphic Company of America, Inc., 310 E. 45th St., New York, N. Y.

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 Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio  
 Hoe, R., & Co., Inc., 910 E. 138th St., at East River, New York, N. Y.  
 Miehle Printing Press & Mfg. Co., 14th St., and S. Damen Ave., Chicago, Ill.  
 New Era Mfg. Co., 145 Nassau St., New York, N. Y.  
 Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.  
 Webendorfer-Wills Co., Inc., Mount Vernon, N. Y.  
 Willard Press Mfg. Co., 28 W. 23rd St., New York, N. Y.

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Miles Machinery Co., 18 E. 16th St., New York, N. Y.  
 Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

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New England Quartz Co. of New York, 450 Seventh Ave., New York, N. Y.  
 Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

#### **REBUILT EQUIPMENT**

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 Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

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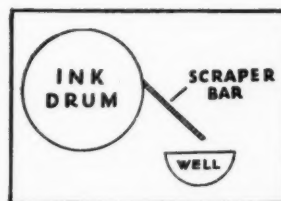
**General Printing Ink Corporation** has issued a set of **SUveneer** ink specimen books which are available on request. The series is very comprehensive and is well laid out, each color being visible when the book is open. For the convenience of the label maker, the carton and the container maker, the inks are illustrated on the actual stocks used in their respective fields.



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Bingham's Son Mfg. Co., Sam'l, Chicago, Ill.

Dayco Division, Dayton Rubber Mfg. Co., Dayton, Ohio

Ideal Roller & Mfg. Co., Inc., 2512 W. 24th St., Chicago, Ill., and 21-24 Thirty-ninth Ave., Long Island City, N. Y.

National Offset Supply Co., St. Louis, Mo.

Niles & Nelson, Inc., 75 West St., New York, N. Y.

Rapid Roller Co., Federal at 26th, Chicago, Ill.

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y., and 402 S. Market St., Chicago, Ill.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

Vulcan Proofing Co., 58th St. & First Ave., Brooklyn, N. Y.

#### **SCREENS—Halftone**

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Ostrander-Seymour Co., The, 1870 S. 54th Ave., Cicero Station, Chicago, Ill.

Pitman, Harold M., Co., 150 Bay St., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

Repro-Art Machinery Co., Wayne Ave. & Berkeley St., Philadelphia, Pa.

Sullebarger Co., E. T., 116 John St., New York, N. Y., and 538 S. Clark St., Chicago, Ill.

#### **SHADING MACHINES AND MEDIUMS**

Ben Day, Inc., 118 E. 28th St., New York, N. Y.

Craftint Mfg. Co., 210 St. Clair Ave., Cleveland, Ohio

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

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Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio—1076 W. Division St., Chicago, Ill.

Mallinkrodt Chemical Works, 3600 N. 2nd St., St. Louis, Mo.

#### **STARTERS AND CONTROLLERS FOR ELECTRIC MOTORS**

Monitor Controller Co., Inc., 51 S. Gay St., Baltimore, Md.

#### **STRIPPING TABLE**

Miles Machinery Co., 18 E. 16th St., New York, N. Y.

Wesl Mfg. Co., 468 Fourth Ave., New York, N. Y., and Scranton, Pa.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

#### **SULPHUR**

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## LITHOGRAPHIC ABSTRACTS

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Mimeographed lists have been prepared of (1) Periodicals Abstracted by the Department of Lithographic Research, and (2) Books of Interest to Lithographers. Either list may be obtained for six cents, or both for ten cents (in stamps). Address the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

### Photography and Color Correction

**Principles of Dot-Etching.** (Pamphlet) J. S. Mertle. Published by the G. Cramer Dry Plate Co., Shenandoah and Lemp Avenues, St. Louis, Missouri; 25 pages; gratis. Results obtained in dot-etching positives made on dry plates from different manufacturers, with various dot-etching agents, are reported. Numerous photo-micrographs illustrate the comparative results obtained on Cramer Super-Contrast, and on five other brands of plates, which are unnamed. "Rehalogenization" resulted in acceleration of dot-etching. From the standpoint of efficiency, iodine-cyanide is considered superior to the other dot-etching agents. Farmer's reducer gave nearly as good results, but its short life was felt to be detrimental. Haddon's reducer yielded inferior results. Redevelopment with a physical developer containing Adurol resulted in enlargement of dots etched with Farmer's reducer, but not those etched with iodine-cyanide. Loss of opacity was greater on contact positives than on camera positives. Positives on thick-film emulsions retained dot opacity better than those on thin-film emulsions.

**"Auto-recta" Process.** Anonymous. *Deutscher Drucker*, 42, No. 9, June 1936, pp. 339-40. A method of preserving "correct" tone rendering in offset platemaking is described. A low-contrast screen negative is made with large highlight dots at one end, and large shadow dots at the other end, of the scale. Two unscreened auxiliary negatives are made, one having high contrast in the highlight region, the other high contrast in the shadow region. A tripack is made of the three with the screen negative in the middle, the shadow negative uppermost. After a partial exposure through all three on to the positive material, the shadow negative is removed and the rest of the exposure completed. (*Monthly Abstract Bulletin of Eastman Kodak Company*, 23, pp. 27-8 (1937).)

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PL- SEPT.

### Reduction of Contrast in Color Screen Negatives.

F. Piller. *German Patent* No. 639,872 (Apr. 22, 1937). Process for decreasing the contrast in color screen negatives or diapositives to be copied, characterized in that the color screen negative or diapositive is exposed, after development and before fixing, to a diffuse light until the clear plates in the negative are fogged on further development.

### Increasing Contrast by the Dusting Process.

G. Kögel, *German Patent* No. 642,173 (Apr. 15, 1937). Process for increasing contrast by the dusting process, characterized in that nitroderivatives of polyhydroxyl compounds, together with sensitizers, are used on the chosen carrier, the layer is exposed under an image, and then dusted with the usual materials.

### Production of Dust Images without the use of Chromates.

G. Kögel. *German Patent* No. 642,174 (Apr. 15, 1937). Process for producing dust images without use of chromates, characterized in that light-sensitive organic carbonyl compounds, especially those with low melting points, are used on the desired carrier, exposed under an image, and then dusted with the usual materials.

**Dufaycolor.** G. L. Wakefield. *Process Engraver's Monthly*, 44, No. 523, July 1937, pp. 221-2. The processing of Dufaycolor film, with particular reference to its use in process work, is described in detail. Formulas are given, and instructions for making color separation negatives from Dufaycolor transparencies are included.

## Planographic Printing Surfaces and Plate Preparation

**Egg Albumin in Litho Plate Coatings.** K. W. Martin. *Photo-Lithographer*, 5, No. 7, July 1937, pp. 26-7. The characteristics required in albumin, dichromate, and ammonia for use in photo-lithography are discussed, and the preparation of the coating solution is described. The various types of hydrometers and their use in controlling the coating solution are explained, and formulas are included.

**Photo-Lithographic Plates.** Morland & Impey, Ltd. *British Patent* No. 464,757 (Applied for Aug. 19, 1935). Photo-lithographic plates are prepared by oxidizing the surface of an aluminum sheet by the process of anodic oxidation and applying a layer of sensitive silver salt emulsion to the oxidized surface, the plate being exposed, developed, and subsequently treated to produce a lithographic printing surface. A sheet of aluminum is first cleaned and freed from grease and then inserted as anode in an electrolytic bath, for example a 5% solution of sulfuric or chromic acid at 80-100° F. The oxidized plate is then washed, neutralized, and cleaned with alcohol and a silver salt emulsion is applied thereto.

THE PHOTO-LITHOGRAPHER

**Etch for Zinc Plates for Planographic Printing.** Firma O. C. Strecker. *German Patent* No. 642,782 (Apr. 29, 1937). Etch for planographic printing on zinc plates, the solution containing essentially ions of phosphoric acid, earth metals, and nitric acid, characterized in that not more than 6 mols of nitrate ions are present to each mol of earth metal ions, these nitrate ions being bound to earth metal ions, alkaline earth metal ions, or alkali ions more or less completely, so that the hydrogen ion concentration of the solution never exceeds a maximum of pH 7.

**Aquatone Printing.** R. F. Salade. *Process Engraver's Monthly*, 44, No. 523, July 1937, pp. 225-6. The "new Aquatone process" of Robert John makes use of a gelatin printing surface. Gelatin is coated on a grained zinc plate, allowed to set, and treated with "formaldehyde alcohol." After being dried, the plate is baked, sensitized with dichromate, and exposed in contact with half-tone wet plate negatives. After being washed in cold water, the plate is ready for printing. Only pure water is used for dampening, special inks are employed, and 200- to 400-line screen half-tones are regularly printed. No allowance for degradation of tone values is necessary.

**Offset Printing Plate.** W. A. Boekelman and A. Elfers. *German Patent* No. 644,508 (June 24, 1937). Offset printing plate characterized in that its water-receptive area consists of a coating of lead or lead alloy changed by the action of air in the usual way and therefore a water-retaining surface.

## Equipment and Materials

**Photographic Plate Whirler or the Like.** Hoh & Hahne. *German Patent* No. 641,582 (Apr. 1, 1937). Device for the whirling of photographic printing plates or the like for the purpose of distributing evenly a liquid light-sensitive coating in which a collector for the coating whirled off is fastened on the plate carrier, characterized in that the collector is shaped like a cone and is so formed that it extends to the back of the plate being whirled.


**Making the Most of the Schlesinger Inking System.** Anonymous. *Paper & Print*, 10, No. 37, Spring 1937, pp. 12, 14, 16. Two pairs of rubbing-down rollers are used in the Schlesinger inking device, separating the operations of breaking up and distributing the ink, and thus permitting the use of a stiffer printing ink. As a result, the printed work is brilliant with one printing, ink emulsification is avoided, and half-tones do not fill in. Ordinary albumin plates may be used, as well as deep-etched plates, but the negative used in preparing the plate should have a slightly steeper scale of gradation. More ink is carried on the rollers than in ordinary printing, and less water is used. The need for set-off preventive in

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some cases, the starting up of the machine, and the choice of inks, are discussed briefly. A photograph and a diagram of the apparatus are included.

**Device for Moistening Planographic Press Plates.** F. Schoembs-Schneider. *German Patent* No. 642,293 (Apr. 15, 1937). Device for moistening planographic printing forms on the press by blowing on warm moist air, characterized in that the moist air after coming from the planographic printing form is immediately removed and thereafter any entrance of moist air into the press room is prevented.

**Quest for Improved Rollers.** Anonymous. *Printing Equipment Engineer*, 53, No. 6, Mar. 1937, pp. 19-20. The properties of the following types of rollers are described: (1) glue-and-glycerin, rubber, vulcanized oil, and synthetic rubber rollers for letterpress, and (2) vulcanized oil rollers and synthetic rubber rollers for lithography. The care and maintenance of these rollers are discussed briefly.

**Printing-Machines.** W. E. Pollard and Roneo, Ltd. *British Patent* No. 464,043 (Applied for Oct. 11, 1935). In an offset printing machine all the inking and damping rollers are mounted in a single separate frame which is mounted in the machine frame so as to be relatively movable thereto, the relative movement of the single separate frame being utilized for bringing about the individual movement of the damping rollers to and from each other, and of the inking rollers to and from each other.

**Typewriter Lines Justified Automatically by New Device.** Anonymous. *Photo-Lithographer*, 5, No. 7, July 1937, p. 54. The "Composograph," which may be attached to any standard typewriter, is very compact and simple to operate. An indicator is set to measure the line, the line is typed, the tabulator key is pressed, and the line is re-typed. Justification is automatic. Columns 25 to 80 characters wide may be handled.

## Paper and Ink

**Method of Printing and Waxing.** W. W. Mock (Assigned to the International Printing Ink Corporation). *U. S. Patent* No. 2,086,428 (July 6, 1937). The method which consists in printing on an article with a printing ink which does not dry on the press and which contains coloring matter dispersed in a solution of a tenacious solid resin dissolved in a non-aqueous non-volatile liquid solvent, and immediately after printing diluting the said solvent in the printed film of said ink with melted wax which is compatible with said solvent and is a non-solvent for said resin and the coloring matter to precipitate or coagulate said resin to produce a hard adhesive non-smearing film occluding the coloring matter.

THE PHOTO-LITHOGRAPHER

**Register and Air Conditioning.** J. F. Springer. *National Lithographer*, 44, No. 7, July 1937, pp. 18-9, 65-6. The effect of moisture on paper, and the relationship between relative humidity and moisture content, are explained. "Well seasoned" paper from the mill cannot meet varying pressroom conditions. The proper means of controlling register is by controlling the relative humidity of the pressroom atmosphere and the moisture content of the paper. Constant pressroom conditions as well as intelligent team-work between paper manufacturer and lithographer are necessary.

**Experiments in the Photo-Electric Measuring of Opacity and Brightness.** T. H. Farebrother. *Paper Maker*, 94, No. 1, July 1937, pp. 104-12 TS. Opacity and brightness are defined, and the instruments for measuring these qualities are described.

## General

**How do we get a Slurry Print?** C. F. Geese. *National Lithographer*, 44, No. 7, July 1937, p. 30. "Slurry" prints and excess wear on the plate result from overpressure in printing. Procedures for adjusting the pressures between the plate and blanket cylinders and between the blanket and paper cylinders are described in detail.

**Offset Printing.** C. W. Dickinson. *Share Your Knowledge Review*, 18, No. 9, July 1937, pp. 18-23. The past, present, and future of offset lithography are discussed in general terms.

**Scum, Grease, and Tint.** L. R. Meloy. *Photo-Lithographer*, 5, No. 7, July 1937, pp. 22-3. The causes and prevention of scum, tint, and grease are discussed, and 19 causes of these difficulties are listed.

**Relief Plates for Offset; Weights and Measures.** A. C. Austin. *National Lithographer*, 44, No. 7, July 1937, pp. 32, 34. A method of making relief plates for dry offset printing of safety checks and like matter is described, with formulas. The metric system of weights and measures is recommended for all photographic and lithographic work, since it involves far less confusion.

**Sound-Records; Photomechanical Printing-Surfaces.** O. Czeija and F. Liarg. *British Patent* No. 463,110 (Convention Date Sept. 22, 1934). Sound-record strips which also bear picture records are produced by printing from a form consisting of a long flexible strip having a printing surface of basic character with a fatty printing color of acid character. The printing form may be prepared by copying the record on a silver halide emulsion layer, and bleaching the developed layer with an agent containing an alkali, e. g. ammonia or borax, printing being carried out with a fatty dye ground with acidic

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**The Finishing Coat (in Metal Decoration).** W. N. Misuraca. *National Lithographer*, 44, No. 7, July 1937, pp. 28, 60. Finishing varnish is applied to the lithographed sheet of metal to protect it and to enhance its appearance. This coating must be elastic but hard, water-clear after baking, and readily dried by baking, without loss of the above characteristics. Practical technique is discussed in some detail, and the usual methods of compounding finishing varnishes are described.

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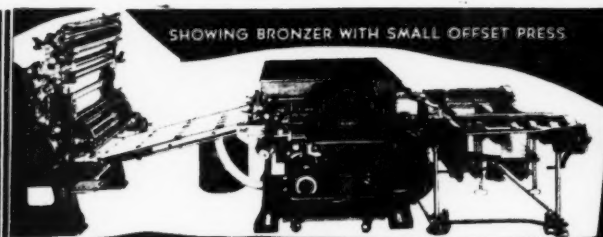
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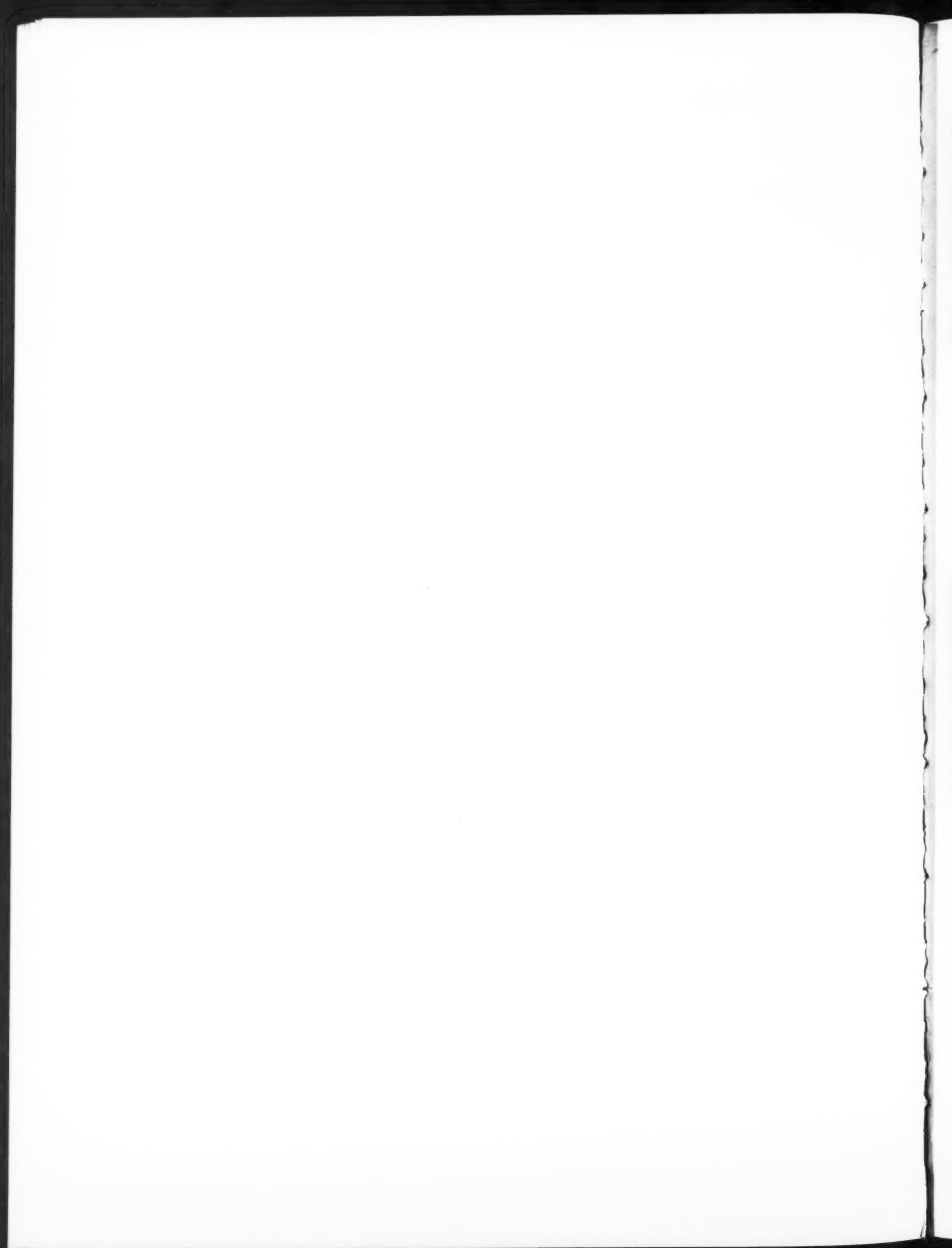
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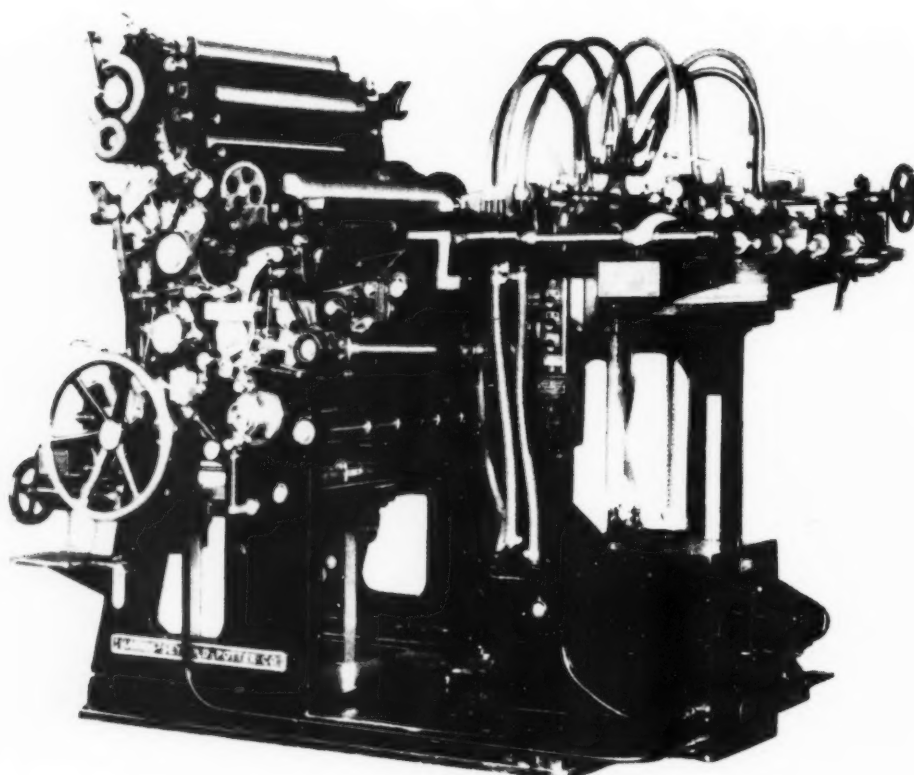
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